Construction Management Plan

pro forma v2.2

Camden

Contents

Revisions & additional material

Please list all iterations here:

Date	Version	Produced by
31/10/2017	2	Chris Slack

Additional sheets

Please note – the review process will be quicker if these are submitted as Word documents or searchable PDFs.

Date	Version	Produced by

Introduction

The purpose of the **Construction Management Plan (CMP)** is to help developers to minimise construction impacts, and relates to both on site activity and the transport arrangements for vehicles servicing the site.

It is intended to be a live document whereby different stages will be completed and submitted for application as the development progresses.

The completed and signed CMP must address the way in which any impacts associated with the proposed works, and any **cumulative impacts of other nearby construction sites**, will be mitigated and managed. The level of detail required in a CMP will depend on the scale and kind of development. Further policy guidance is set out in Camden Planning Guidance **(CPG)** 6: Amenity and **(CPG)** 8: Planning Obligations.

This CMP follows the best practice guidelines as described in Transport for London's (TfL's Standard for Construction Logistics and Community Safety (**CLOCS**) scheme) and Camden's Minimum Requirements for Building Construction **(CMRBC)**.

The approved contents of this CMP must be complied with unless otherwise agreed with the Council in writing. The project manager shall work with the Council to review this CMP if problems arise in relation to the construction of the development. Any future revised plan must also be approved by the Council and complied with thereafter.

It should be noted that any agreed CMP does not prejudice or override the need to obtain any separate consents or approvals such as for road closures or hoarding licences.

If your scheme involves any demolition, you need to make an application to the Council's Building Control Service. Please complete the "**Demolition Notice.**"

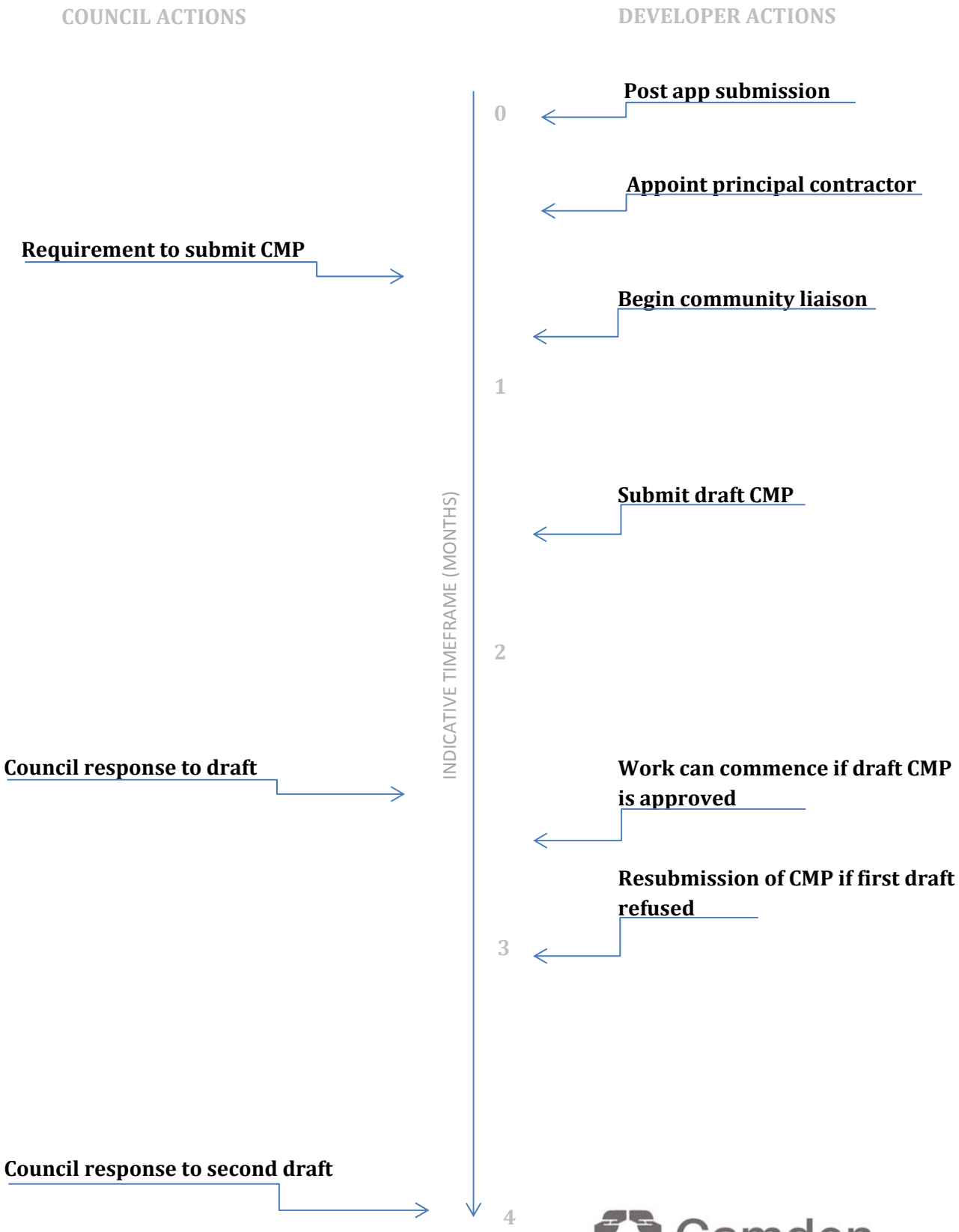
Please complete the questions below with additional sheets, drawings and plans as required. The boxes will expand to accommodate the information provided, so please provide as much information as is necessary. **It is preferable if this document, and all additional documents, are completed electronically and submitted as Word files to allow comments to be easily documented. These should be clearly referenced/linked to from the CMP.**

Please notify that council when you intend to start work on site. Please also notify the council when works are approximately **3 months from completion.**

(Note the term 'vehicles' used in this document refers to all vehicles associated with the implementation of the development, e.g. demolition, site clearance, delivery of plant & materials, construction, etc.)

Revisions to this document may take place periodically.

Timeframe


COUNCIL ACTIONS
DEVELOPER ACTIONS
Post app submission
0
Appoint principal contractor
Requirement to submit CMP
Begin community liaison
1
Submit draft CMP
INDICATIVE TIMEFRAME (MONTHS)
2
Council response to draft
Work can commence if draft CMP is approved
Resubmission of CMP if first draft refused
3
Council response to second draft
4

Contact

1. Please provide the full postal address of the site and the planning reference relating to the construction works.

Address: Site Address: Bewlay House, 32 Jamestown Road, Camden, London, NW1 7BY

Planning application reference: 2015/0079/P (2015/2575/P – Planning sought for solely commercial)

2. Please provide contact details for the person responsible for submitting the CMP.

Name: Chris Slack

Address: Royal HaskoningDHV, 2 Abbey Gardens, Great College Street, Westminster, London SW1P 3NL, United Kingdom

Email: Christopher.slack@rhdhv.com

Phone: 0207-151-0019

3. Please provide full contact details of the site project manager responsible for day-to-day management of the works and dealing with any complaints from local residents and businesses.

Name:	Geoff King
Address:	Site Office, 32 Jamestown Road, Camden, London NW1 7BY
Tel:	07714 787357
Email:	g.king@londoncost.co.uk

4. Please provide full contact details of the person responsible for community liaison and dealing with any complaints from local residents and businesses if different from question 3. In the case of **Community Investment Programme (CIP)**, please provide contact details of the Camden officer responsible.

Name: Ms Claire Burlington

Address: London & Regional Properties, 8th Floor South, 55 Baker Street, London, W1U 8EW

Tel: 02075639038

Email: cburlington@lrp.co.uk

5. Please provide full contact details including the address where the main contractor accepts receipt of legal documents for the person responsible for the implementation of the CMP.

Name: Capri Mechanical Services Ltd

Address: 53-55 Cutlers Road, South Woodham Ferrers, Chelmsford, Essex CM3 5WA

Email: Kevin.rydon@caprimechanical.co.uk

Phone: 01245 326104

Site

6. Please provide a site location plan and a brief description of the site, surrounding area and development proposals for which the CMP applies.

The site is located at 32 Jamestown Road, Camden, with the new Holiday Inn, Camden adjoining the east party wall, and the Ice Works adjoining the west party wall. The north elevation is onto the Regent's Canal.

The scope of work following the initial demolition includes the following;-

- Structural alterations to the 4 reinforced concrete slabs
- New 4th and 5th floor reinforced concrete slabs
- New structural steel roof
- New configuration for Jamestown Road main entrance in to the ground floor lobby
- New cladding to north and rear elevations
- Office fit out to basement, GF and 5 upper floors including mechanical and electrical
- Site logistics as per attached Plan – **HOC-P067-SKT-0001 Rev 1**

7. Please provide a very brief description of the construction works including the size and nature of the development and details of the main issues and challenges (e.g. narrow streets, close proximity to residential dwellings etc.).

The location of the project constrains all access for deliveries and personal from Jamestown Road only. The site is circa 35/37 m from street elevation to the canal elevation, and 27m wide between the adjoining walls. The structural and envelope construction (including roofing), both require a crane. As per attached logistics plan it is pro-posed to locate a tower crane located in the newly formed opening that creates the feature atrium throughout the building floor plates.

A scaffold licence was historically obtained by the previous contractor, HOC. This licence covered the period 19/02/16 – 20/04/17. This licence has now been closed. The scaffolding was erected for demolition by the previous contractor with a view to carrying out minimal alterations to suit the new façade and extension upward as the new floors are constructed.

There is a scaffold tower licence which was obtained by the incumbent contractor, London Cost Consultancy, which covers the period 07/07/17 – 07/01/18.

The tower crane will allow pick up from Jamestown Road and service the project deliveries. Works to the north elevation adjacent the canal will be from scaffolding, with protection fan over the water.

Once the new 4th floor is constructed, this does yield area for storage of materials for the 5th floor and roof terraces thus allowing quick turnaround for deliveries.

Works include preparation and connection to the existing structure. Works will be done in accordance with Best Practise and in consultation with our neighbours to minimise impact for any distribution.

8. Please identify the nearest potential receptors (dwellings, business, etc.) likely to be affected by the activities on site (i.e. noise, vibration, dust, fumes, lighting etc.).

Neighbouring properties that potentially may be affected by the works are the Holiday Inn Camden and Ice Works.

It is our intention to manage all activities on site to reduce disturbances to the neighbouring properties. There-fore, to reduce dust and dirt on the public highway to a minimum we will allow for regular cleaning, and removal of build-up of any debris. All deliveries will be undertaken from Jamestown Road, with vehicles pulling up adjacent to the site frontage. Unloading of vehicles is to be undertaken using the static tower crane. Concrete deliveries will have control over suitable wash out facilities (lined skip etc.). Sources of dust are envisaged to occur from concrete trimming works and the limited groundworks (drainage connections). Where cutting or breaking is carried out, dampening will be used to avoid creating dust. Where necessary, road sweepers will be hired to control excess debris.

The Considerate Contractors Scheme will also be adopted for the works on site. Contact details will be affixed to the front site hoarding indicating details of who to contact. This contact list will include names and numbers of staff on site should neighbours / the public require the need to contact a staff member.

In order to reduce the noise disturbance to neighbouring properties we propose, subject to planning permission, all building works can only occur between:

- 08:00 and 18:00 Monday to Friday;
- 08:00 and 13:00 on Saturday; and
- Not at all on Sundays, bank holidays and public holidays.

We intend to keep our neighbours informed during the course of the programme and give notice of any site works that may impact their business and quality of life.

9. Please provide a scaled plan detailing the local highway network layout in the vicinity of the site. This should include details of on-street parking bay locations, cycle lanes, footway extents and proposed site access locations.

Please refer to drawing package enclosed with this CMP (reference **– PB6633 SK01**).

10. Please provide the proposed start and end dates for each phase of construction as well as an overall programme timescale. (A Gantt chart with key tasks, durations and milestones would be ideal).

The site works commence 13th July 2015 with completion in September 2017

LCC programme is attached.

11. Please confirm the standard working hours for the site, noting that the standard working hours for construction sites in Camden are as follows:

- 8.00am to 6pm on Monday to Friday
- 8.00am to 1.00pm on Saturdays
- No working on Sundays or Public Holidays

It is confirmed that site operations will conform to the standard working hours. Construction vehicle movements will be limited to the following times:

- 09:30-16:30 – Monday to Friday
- 08:00-13:00 – on Saturdays

12. Please indicate if any changes to services are proposed to be carried out that would be linked to the site during the works (i.e. connections to public utilities and/or statutory undertakers' plant). Larger developments may require new utility services. If so, a strategy and programme for coordinating the connection of services will be required. If new utility services are required, please confirm which utility companies have been contacted (e.g. Thames Water, National Grid, EDF Energy, BT etc.) You must explore options for the utility companies to share the same excavations and traffic management proposals. Please supply details of your discussions.

All local services have been contacted prior to this CMP being completed.

All services to the site are to be discharged and the works are demolition and façade retention. New connections and runs will be installed in accordance with the relevant legislations.

There is currently a sub-station located within the site that is to be removed from site as part of the services works. A new substation has been purchased prior to the CMP being completed.

Drainage of the site is to be carried out using the existing drainage arrangements. The existing interceptor chamber is to be used and is secure.

Community Liaison

A neighbourhood consultation process must have been undertaken prior to submission of the CMP first draft. This consultation must relate to construction impacts, and should take place following the granting of planning permission in the lead up to the submission of the CMP. A consultation process specifically relating to construction impacts must take place regardless of any prior consultations relating to planning matters. This consultation must include all of those individuals that stand to be affected by the proposed construction works. These individuals should be provided with a copy of the draft CMP, or a link to an online document. They should be given adequate time with which to respond to the draft CMP, and any subsequent amended drafts. Contact details which include a phone number and email address of the site manager should also be provided.

Significant time savings can be made by running an effective neighbourhood consultation process. This must be undertaken in the spirit of cooperation rather than one that is dictatorial and unsympathetic to the wellbeing of local residents and businesses.

These are most effective when initiated as early as possible and conducted in a manner that involves the local community. Involving locals in the discussion and decision making process helps with their understanding of what is being proposed in terms of the development process. **The consultation and discussion process should have already started, with the results incorporated into the CMP first draft submitted to the Council for discussion and sign off.** This communication should then be ongoing during the works, with neighbours and any community liaison groups being regularly updated with programmed works and any changes that may occur due to unforeseen circumstances through newsletters, emails and meetings.

Please note that for larger sites, details of a construction working group may be required as a separate S106 obligation. If this is necessary, it will be set out in the S106 Agreement as a separate requirement on the developer.

Cumulative impact

Sites located within high concentrations of construction activity that will attract large numbers of vehicle movements and/or generate significant sustained noise levels should consider establishing contact with other sites in the vicinity in order to manage these impacts.

The Council can advise on this if necessary.

13. Consultation

The Council expects meaningful consultation. For large sites, this may mean two or more meetings with local residents **prior to submission of the first draft CMP**.

Evidence of who was consulted, how the consultation was conducted and a summary of the comments received in response to the consultation should be included. Details of meetings including minutes, lists of attendees etc. should be appended.

In response to the comments received, the CMP should then be amended where appropriate and, where not appropriate, a reason given. The revised CMP should also include a list of all the comments received. Developers are advised to check proposed approaches to consultation with the Council before carrying them out. If your site is on the boundary between boroughs then we would recommend contacting the relevant neighbouring planning authority.

Please provide details of consultation of draft CMP with local residents, businesses, local groups (e.g. residents/tenants and business associations) and Ward Councillors.

A single point of contact (Gerry Guinan) was appointed to undertake the consultation process and to administer procedures under the party wall Act. A number of formal notices were served.

The consultation process consisted of contacting all local residents and businesses. This included contacting the following:

- **Holiday Inn** – The freehold owners (who are also the operators) of the Holiday Inn at 32 Jamestown Road.
- **Iceworks** – The freehold owner of the Iceworks premises 34-36 Jamestown Road.
- **Iceworks** – The leasehold owners of the commercial premises who occupy the front of the Iceworks namely Star Lizard
- **Iceworks** – Residential leaseholders whose flats are situated to the rear adjoining 32 Jamestown Road
- **The Canal and Rivers Trust**

Holiday Inn

The owners appointed Joel Michaels MRICS as their Surveyor to represent their interests as well as their consultant Architect - Justin White.

The appointed point of contact attended a number of meetings with the Holiday Inn. The meetings attended included:

- Before commencement of works – 4pm 7th October 2014.
    - Attendees: Geoff Springer, Gerry Guinan, Justin White
    - The meeting was set up to establish a line of ongoing liaison and to understand the Hotel day to day requirements.
- Initial Meeting – 27th November 2014
    - Attendees: Gerry Guinan, Joel Michaels
- Initial Meeting – 10th December 2014
    - Attendees: Gerry Guinan, Hotel management representative

Gerry Guinan is/has been involved in ongoing liaison with all parties involving service of Awards under the party wall Act which incorporates the Hotels requirements.

Iceworks

Andrew Rand MRICS was appointed by all parties associated with the Iceworks as their Surveyor to represent their interests.

The appointed point of contact attended a number of meetings with the various parties associated with the Iceworks. The meetings attended included:

- Before commencement of works – 2.30pm 7th October 2014
    - Attendees: Gerry Guinan, Geoff Springer, Iceworks Freehold/Leasehold senior management.
    - The meeting was set up to establish a line of ongoing liaison and to understand the freehold/leasehold day to day requirements.
- Further meeting – 2.30pm 28th January 2015
    - Attendees: Gerry Guinan, Andrew Rand

Gerry Guinan is/has been involved in ongoing liaison with all parties involving service of Awards under the party wall Act which incorporates the requirements of the relevant owners as listed above at the Iceworks premises.

14. Construction Working Group

Please provide details of community liaison proposals including any Construction Working Group that will be set up, addressing the concerns of the community affected by the works, the way in which the contact details of the person responsible for community liaison will be advertised to the local community, and how the community will be updated on the upcoming works i.e. in the form of a newsletter/letter drop, or weekly drop in sessions for residents.

Community consultation meetings with neighbours, ward councillors, local businesses etc. have been carried out for the proposals after demolition and this was prior to the planning application being submitted. Comments have been constructive and schemes were amended based upon the result of the consultations. Regular dialogue to be held with our neighbours, Holiday Inn and Iceworks.

15. Schemes

Please provide details of your 'Considerate Constructors Scheme' registration, and details of any other similar relevant schemes as appropriate. Contractors will also be required to follow the "Guide for Contractors Working in Camden" also referred to as "Camden's Considerate Contractors Manual".

The Considerate Contractors Scheme will also be adopted for the entirety of works on site. Contact details will be affixed to the front site hoarding indicating details of who to contact. This contact list will include names and numbers of staff on site should neighbours / the public require the need to contact a staff member.

For reference, the Considerate Contractors Scheme registration number for this project is **93688 – 32 Jamestown Road, Camden.**

16. Neighbouring sites

Please provide a plan of existing or anticipated construction sites in the local area and please state how your CMP takes into consideration and mitigates the cumulative impacts of construction in the vicinity of the site. The council can advise on this if necessary.

There are no other construction sites operating within the immediate vicinity of the site on Jamestown Road.

Transport

This section must be completed in conjunction with your principal contractor. If one is not yet assigned, please leave the relevant sections blank until such time when one has been appointed.

Camden is a CLOCS Champion, and is committed to maximising road safety for Vulnerable Road Users (VRUs) as well as minimising negative environmental impacts created by motorised road traffic. As such, all vehicles and their drivers servicing construction sites within the borough are bound by the conditions laid out in the CLOCS Standard.

This section requires details of the way in which you intend to manage traffic servicing your site, including your road safety obligations with regard to VRU safety. It is your responsibility to ensure that your principal contractor is fully compliant with the terms laid out in the CLOCS Standard. It is your principal contractor's responsibility to ensure that all contractors and sub-contractors attending site are compliant with the terms laid out in the CLOCS Standard.

Checks of the proposed measures will be carried out by the council to ensure compliance. Please refer to the CLOCS Standard when completing this section. Guidance material which details CLOCS requirements can be accessed here, details of the monitoring process are available here.

Please contact CLOCS@camden.gov.uk for further advice or guidance on any aspect of this section.

Please refer to the CLOCS Overview and Monitoring Overview documents referenced above which give a breakdown of requirements.

CLOCS Contractual Considerations

17. Name of Principal contractor:

Name: Capri Mechanical Services Ltd

Address: 53-55 Cutlers Road, South Woodham Ferrers, Chelmsford, Essex CM3 5WA

Email: Kevin.rydon@caprimechanical.co.uk

18. Please submit the proposed method for checking operational, vehicle and driver compliance with the CLOCS Standard throughout the duration of the contract (please refer to our CLOCS Overview document and Q18 example response).

FORS Bronze accreditation as a minimum will be a contractual requirement, FORS Silver or Gold operators will be appointed where possible. Where FORS Bronze operators are appointed, written assurance will be sought from contractors that all vehicles over 3.5t are equipped with additional safety equipment (as per CLOCS Standard P13), and that all drivers servicing the site will have undertaken approved additional training (e.g. Safe Urban Driving + 1 x e-learning module OR Work Related Road Risk Vulnerable Road User training + on-cycle hazard awareness course + 1 x e-learning module etc.). CLOCS Compliance will be included as a contractual requirement.

Where doubt exists, desktop checks will be made against the FORS database of trained drivers and accredited companies as outlined in the CLOCS Standard Managing Supplier Compliance guide.

Checks of FORS ID numbers will form part of the periodic checks and will be carried out as per an appropriate risk scale.

Random spot checks will be carried out by site staff on vehicles and drivers servicing the site at a frequency based on an appropriate risk scale. These will include evidence of further training, license checks, evidence of routing information, and checks of vehicle safety equipment. Results from these checks will be logged and retained, and enforced upon accordingly.

Where the contractors own vehicles and drivers are used the above approach will be modified accordingly.

Collision reporting data will be requested from operators and acted upon when necessary.

19. Please confirm that you as the client/developer and your principal contractor have read and understood the CLOCS Standard and included it in your contracts. Please sign-up to join the CLOCS Community to receive up to date information on the standard by expressing an interest online.

I confirm that I have included the requirement to abide by the CLOCS Standard in my contracts to my contractors and suppliers:

Confirmed.

Please contact CLOCS@camden.gov.uk for further advice or guidance on any aspect of this section.

Site Traffic

Sections below shown in blue directly reference the CLOCS Standard requirements. The CLOCS Standard should be read in conjunction with this section.

20. Traffic routing: *"Clients shall ensure that a suitable, risk assessed vehicle route to the site is specified and that the route is communicated to all contractors and drivers. Clients shall make contractors and any other service suppliers aware that they are to use these routes at all times unless unavoidable diversions occur."* (P19, 3.4.5)

Routes should be carefully considered and risk assessed, taking into account the need to avoid where possible any major cycle routes and trip generators such as schools, offices, public buildings, museums etc. Where appropriate, on routes that use high risk junctions (i.e. those that attract high volumes of cycling traffic) installing Trixi mirrors to aid driver visibility should be considered.

Consideration should also be given to weight restrictions, low bridges and cumulative impacts of construction (including neighbouring construction sites) on the public highway network. The route(s) to and from the site should be suitable for the size of vehicles that are to be used.

a. Please indicate routes on a drawing or diagram showing the public highway network in the vicinity of the site including details of how vehicles will be routed to the Transport for London Road Network (TLRN) on approach and departure from the site.

Please see the attached Haul Route Plan indicating vehicle haul routes from the site onto the TLRN. Drawing reference **PB6633-CMP-01** and **PB6633-CMP-02.**

Further information with regards to the advice and instructions provided to drivers of vehicles visiting the site can be found in the attached Logistics and Management Plan to the rear of this document.

b. Please confirm how contractors, delivery companies and visitors will be made aware of the route (to and from the site) and of any on-site restrictions, prior to undertaking journeys.

The access/egress for construction vehicles on site will be from Jamestown Road and all parties will be required to give a notice period of 48 hours prior to arrival/departure. All vehicular movement accessing/egressing the site will be monitored and controlled by the project manager. They will be responsible for the coordination and control of all aspects of material deliveries and movement.

The attached Logistics and Management Plan is provided to all contractors, delivery companies and visitors to ensure they are aware of the following:

- Routes to be followed to the site;
- The arrangements upon arriving at the site;
- Rules that drivers must follow;
- The surrounding environment; and
- Safety measures that must be followed.

21. Control of site traffic, particularly at peak hours: "*Clients shall consider other options to plan and control vehicles and reduce peak hour deliveries"* (P20, 3.4.6)

Construction vehicle movements are generally acceptable between 9.30am to 4.30pm on weekdays and between 8.00am and 1.00pm on Saturdays). If there is a school in the vicinity of the site or on the proposed access and/or egress routes, then deliveries must be restricted to between 9.30am and 3pm on weekdays during term time. (Refer to the *Guide for Contractors Working in Camden*).

A delivery plan should ensure that deliveries arrive at the correct part of site at the correct time. Instructions explaining such a plan should be sent to all suppliers and contractors**.** Consideration should be given to the location of any necessary holding areas for large sites with high volumes of traffic. Vehicles must not wait or circulate on the public highway. Whilst deliveries should be given set times to arrive, dwell and depart, no undue time pressures should be placed upon the driver at any time.

a. Please provide details of the typical sizes of all vehicles and the approximate frequency and times of day when they will need access to the site, for each phase of construction. You should estimate the average daily number of vehicles during each major phase of the work, including their dwell time at the site. High numbers of vehicles per day and/or long dwell times may require vehicle holding procedures.

The anticipated vehicles to be attending the site for deliveries or collections are:

Skip lorries for general building waste removal (including concrete wash out skips)

Concrete trucks – maximum pours will be circa 100m3, i.e. 15 to 16 wagons over 6 to 8 hr period, 1 per 30 mins. There are approx. 6 major pours. With one pour per week, this is the 4th, and 5th floors. Lower floors will be significantly smaller pours – circa 30m3, 5 to 6 wagons over 2 or 3 hours. Steel and decking deliveries – brought in to suit daily erection output on smaller 15t rigid lorries.

Other deliveries include scaffolding, cladding, brick/block work, roofing and internal fit out materials including MEP equipment. Site team will ensure that suppliers as part of their delivery notification confirm the load arrangements to ensure minimal dwell time on site.

b. Please provide details of other developments in the local area or on the route.

There are no other construction sites operating within the immediate vicinity of the site on Jamestown Road.

c. Please outline the system that is to be used to ensure that the correct vehicle attends the correct part of site at the correct time.

The site is provided with a single point of access. Vehicles will pull up adjacent to the site frontage on Jamestown Road. Traffic marshals and banksmen will be present for all deliveries. The full delivery address (not just the post code) and details of delivery restrictions / times are to be placed on orders.

Contractors, delivery companies and visitors will be provided with a copy of the Logistics and Traffic Management Plan, which is attached to the rear of this CMP. This sets out the system through which vehicle arrivals are managed to ensure they attend the correct part of the site at the correct time. Arrivals at the site are expected to carry out the following process after providing a 48hour notice and being scheduled into the delivery schedule:

- Vehicles will call the site supervisor 30minutes prior to arrival at the site.
- Access will be provided from Jamestown Road parking directly outside the site.
- Vehicles will traverse along Jamestown Road and where required will be held marshalled along Jamestown Road and then in to the drop off point.
- Delivery vehicles must be off loaded immediately and manoeuvred away from the site.

d. Please identify the locations of any off-site holding areas (an appropriate location outside the borough may need to be identified, particularly if a large number of delivery vehicles are expected) and any measures that will be taken to ensure the prompt admission of vehicles

to site in light of time required for any vehicle/driver compliance checks. Please refer to question 24 if any parking bay suspensions will be required for the holding area.

Not applicable for this site.

e. Please provide details of any other measures designed to reduce the impact of associated traffic (such as the use of construction material consolidation centres).

Not applicable for this site.

22. Site access and egress: *"Clients shall ensure that access to and egress from the site is appropriately managed, clearly marked, understood and clear of obstacles."* (P18, 3.4.3)

Vehicles entering and leaving the site should be carefully managed, using gates that are clearly marked and free from obstacles. Traffic marshals must ensure the safe passage of all traffic on the public highway, in particular pedestrians and cyclists, when vehicles are entering and leaving site, particularly if reversing.

Traffic marshals, or site staff acting as traffic marshals, should hold the relevant qualifications required for directing large vehicles when reversing. Marshals should be equipped with 'STOP – WORKS' signs (not STOP/GO signs) if control of traffic on the public highway is required. Marshals should have radio contact with one another where necessary.

a. Please detail the proposed access and egress routes to and from the site

Please refer to drawing package enclosed with this CMP (reference – **HOC-P067-SKT-0001 Rev 1**) and the Logistics and Traffic Management Plan.

Traffic marshals are to be in place throughout the construction. Vehicles arriving at the site will be required to pull up on Jamestown Road immediately adjacent to the site frontage. Traffic marshals will then be responsible for managing the traffic along Jamestown Road.

The temporary suspension of parking bays located to the opposite side of the carriageway has been utilised in earlier phases of the project to allow for traffic management to be implemented. The suspended bays allowed additional carriageway width around the stationary vehicles servicing the site.

In the later stages of the project the car parking bays were suspended as and when required.

b. Please describe how the access and egress arrangements for construction vehicles will be managed.

The access/egress for construction vehicles on site will be from Jamestown Road and all parties will be required to give a notice period of 48 hours prior to arrival/departure. All vehicular movement accessing/egressing the site will be monitored and controlled by the project manager. The project manager will be responsible for the coordination and control of all aspects of material deliveries and movement. Traffic marshals and banksmen will be present for all deliveries and will instruct all delivery vehicles and ensure the safety of the general public and all personnel on site.

Traffic marshals will be responsible for implementing traffic management measures on Jamestown Road when a vehicle is serving the site.

The Logistics and Traffic Management Plan, attached to the rear of this document, sets out the process by which vehicles arrive and leave the site. The process is as follows:

- Vehicles will call the site supervisor 30minutes prior to arrival at the site.
- Access will be provided from Jamestown Road parking directly outside the site.
- Vehicles will traverse along Jamestown Road and where required will be held marshalled along Jamestown Road and then in to the drop off point.
- Delivery vehicles must be off loaded immediately and manoeuvred away from the site.

c. Please provide swept path drawings for any tight manoeuvres on vehicle routes to and from the site including proposed access and egress arrangements at the site boundary (if necessary).

Swept Path Analysis indicating a vehicle arriving and departing the construction site is provided in the attached plan **PB6633-SK01**.

d. Provision of wheel washing facilities should be considered if necessary. If so, please provide details of how this will be managed and any run-off controlled.

To reduce dust and dirt on the public highway to a minimum a 2.4m high solid site hoarding will be constructed around the site and the whole scaffold will be fully clad in Monaflex sheeting. A layer of polythene will be sandwiched between the lower lifts of boards to the front and rear scaffolds. During ground works phase a wheel wash is to be used on any vehicle that visits or leave site in order to prevent mud in Jamestown Road and the surrounding roads. Where necessary road sweepers will be hired to control excess debris.

23. Vehicle loading and unloading: *"Clients shall ensure that vehicles are loaded and unloaded on-site as far as is practicable."* (P19, 3.4.4)

If this is not possible, Traffic Marshalls must ensure the safe passage of pedestrians, cyclists and motor traffic in the street when vehicles are being loaded or unloaded.

Please provide details of the parking and loading arrangements for construction vehicles with regard to servicing and deliveries associated with the site (e.g. delivery of materials and plant, removal of excavated material). This is required as a scaled site plan, showing all points of access and where materials, skips and plant will be stored, and how vehicles will access and egress the site. If loading is to take place off site, please identify where this is due to take place and outline the measures you will take to ensure that loading/unloading is carried out safely. Please outline in question 24 if any parking bay suspensions will be required.

All vehicular movement to and from the site will be managed by the project manager. Notification will be given to all contractors/sub-contractors when vehicles travel to site and any unloading will be completed by all skilled contractors in order to ensure no vehicles dwell on site.

Traffic marshals and banksmen will be present for all deliveries and will instruct all delivery vehicles and ensure the safety of the general public and all personnel on site.

Vehicles will pull up adjacent to the site frontage on Jamestown Road. Vehicles were unloaded using the on-site tower crane, with deliveries moved immediately to the appropriate loading bay and floor.

The attached plan **PB6633-SK01** identifies the proposed site layout and vehicle accessing the site.

Highway interventions

Please note that Temporary Traffic Orders (TTOs) and hoarding/scaffolding licenses may be applied for prior to CMP submission but won't be granted until the CMP is signed-off.

If the site is on or adjacent to the TLRN, please provide details of preliminary discussions with Transport for London in the relevant sections below.

24. Parking bay suspensions and temporary traffic orders

Please note, parking bay suspensions should only be requested where absolutely necessary. Parking bay suspensions are permitted for a maximum of 6 months, requirement of exclusive access to a bay for longer than 6 months you will be required to obtain Temporary Traffic Order (TTO) for which there is a separate cost.

Please provide details of any proposed parking bay suspensions and TTO's which would be required to facilitate construction. **Building materials and equipment must not cause obstructions on the highway as per your Considerate Contractors obligations unless the requisite permissions are secured.**

Information regarding parking suspensions can be found here.

The temporary suspension of parking was undertaken historically under the previous contractor HOC in association with the earlier stages of work. The suspension of the parking bays is not regularly required within the later phases of the project and as such the parking bays are only suspended when required.

25. Scaled drawings of highway works

Please note that use of the public highway for storage, site accommodation or welfare facilities is at the discretion of the Council and is generally not permitted. If you propose such use you must supply full justification, setting out why it is impossible to allocate space on-site. You must submit a detailed (to-scale) plan showing the impact on the public highway that includes the extent of any hoarding, pedestrian routes, parking bay suspensions and remaining road width for vehicle movements. We prefer not to close

footways but if this is unavoidable, you should submit a scaled plan of the proposed diversion route showing key dimensions.

- a. Please provide accurate scaled drawings of any highway works necessary to enable construction to take place (e.g. construction of temporary vehicular accesses).

Please see plan **HOC-P067-SKT-0001 Rev 1** and the Logistics and Traffic Management Plan attached to the rear of this document.

b. Please provide details of all safety signage, barriers and accessibility measures such as ramps and lighting etc.

Please see plan **HOC-P067-SKT-0001 Rev 1** and the Logistics and Traffic Management Plan attached to the rear of this document.

26. Diversions

Where applicable, please supply details of any diversion, disruption or other anticipated use of the public highway during the construction period (alternatively a plan may be submitted).

Outline logistics plan is enclosed for reference. Further drawings and details will be developed/updated as the project progresses.

Deliveries to the site will be undertaken from the highway. Vehicles will pull up alongside the site frontage. When required the parking bays opposite will be suspended to allow a minor diversion of traffic to be undertaken when servicing is being undertaken.

27. VRU and pedestrian diversions, scaffolding and hoarding

Pedestrians and/or cyclist safety must be maintained if diversions are put in place. Vulnerable footway users should also be considered. These include wheelchair users, the elderly, those with walking difficulties, young children, those with prams, the blind and partially sighted. Appropriate ramping must be used if cables, hoses, etc. are run across the footway.

Any work above ground floor level may require a covered walkway adjacent to the site. A licence must be obtained for scaffolding and gantries. The adjoining public highway must be kept clean and free from obstructions. Lighting and signage should be used on temporary structures/skips/hoardings etc.

A secure hoarding will generally be required at the site boundary with a lockable access.

a. Please provide details describing how pedestrian and cyclist safety will be maintained, including any proposed alternative routes (if necessary), and any Traffic Marshall arrangements.

The works on site will not affect pedestrian or cyclist safety as we are proposing a 2.4m high hoarding to secure the site.

b. Please provide details of any temporary structures which would overhang the public highway (e.g. scaffolding, gantries, cranes etc.) and details of hoarding requirements or any other occupation of the public highway.

The location of the project constrains all access for deliveries and personal from Jamestown Road only. The site is circa 35/37 m from street elevation to the canal elevation, and 27m wide between the adjoining walls. The structural and envelope construction (including roofing), both require a crane. As per attached logistics plan it is pro-posed to locate a tower crane located in the newly formed opening that creates the feature atrium throughout the building floor plates.

A scaffold licence was historically obtained by the previous contractor, HOC. This licence covered the period 19/02/16 – 20/04/17. This licence has now been closed. The scaffolding was erected for demolition by the previous contractor with a view to carrying out minimal alterations to suit the new façade and extension upward as the new floors are constructed.

There is a scaffold tower licence which was obtained by the incumbent contractor, London Cost Consultancy, which covers the period 07/07/17 – 07/01/18.

The tower crane will allow pick up from Jamestown Road and service the project deliveries. Works to the north elevation adjacent the canal will be from scaffolding, with protection fan over the water.

SYMBOL IS FOR INTERNAL USE

Environment

To answer these sections please refer to the relevant sections of **Camden's Minimum Requirements for Building Construction (CMRBC).**

28. Please list all noisy operations and the construction method used, and provide details of the times that each of these are due to be carried out.

The Considerate Contractors Scheme will also be adopted for the works on site. Contact details will be affixed to the front site hoarding indicating details of who to contact. This contact list will include names and numbers of staff on site should neighbours / the public require the need to contact a staff member.

In order to reduce the noise disturbance to neighbouring properties we propose, subject to planning permission, all building works can only occur between:

- 08:00 and 18:00 Monday to Friday;
- 08:00 and 13:00 on Saturday; and
- Not at all on Sundays, bank holidays and public holidays.

We intend to keep our neighbours informed during the course of the programme and give notice of any site works that may impact their business and quality of life.

A full list of the activities expected to produce noise are detailed within the attached Construction Noise Assessment report produced by WYG in November 2015.

29. Please confirm when the most recent noise survey was carried out (before any works were carried out) and provide a copy. If a noise survey has not taken place please indicate the date (before any works are being carried out) that the noise survey will be taking place, and agree to provide a copy.

A Construction Noise Assessment was carried out by WYG in November 2015. A copy has been appended to this Pro Forma.

30. Please provide predictions for noise and vibration levels throughout the proposed works.

A noise assessment has been undertaken by WYG and is appended to this CMP.

Sources of noises

- Trimming / drilling to reinforced concrete
- Pokers during concrete placements
- Hand tools for fixing of cladding and the like
- Hand tools for internal fit out
- Breakout in basement for ducting through existing basement RC floor
- Fixings to party wall's for flashing / insulation etc.

31. Please provide details describing mitigation measures to be incorporated during the construction/demolition works to prevent noise and vibration disturbances from the activities on the site, including the actions to be taken in cases where these exceed the predicted levels.

Suitable noise/vibration methods/tools will be adopted to minimise disruption to neighbours. Works are general construction, as heavy demolition has already been completed. Where further minor demolition is required– riser openings are required LCC will consult with neighbours to understand, in particular the hotel for any specific timing issues with events / dining times and develop a plan that respects their needs in balance with best practise guides.

Measures to limit the impact of noise and vibration will include:

- Best Practical Means (BPM) will be implemented in an attempt to minimise the impact whilst allowing the required works to be undertaken. This will require a consideration of:
    - Proximity to residents
    - Duration of the works
    - The time of the day at which the works are to be undertaken
    - The engineering practicability and safety
- All working hours restrictions will be adhered to. No night time works will be undertaken unless absolutely necessary and agreed with LBHF prior to commencement. All measures possible will be undertaken to minimise noise from any night time working.
- Noise will be controlled using a hierarchal system with, where possible, the aim being to eliminate all noise. The hierarchy is set as follows:
    - Eliminate
    - Substitute
    - Isolate
    - Control
- In the event that excessive noise cannot be avoided, screening and acoustic enclosures will be utilised.
- Drivers will be required to turn off their engines when stationary to prevent noise from idling vehicles.
- Vehicles will deliver to/collect from the site during permitted working hours to prevent noise during unsociable hours.
- Early and good public relations with the adjacent tenants and occupants of buildings will reduce the likelihood of complaints.
- Complaints about noise levels will be reported, logged and immediately investigated by the Site Manager.
- All works will also be within the hours described in question No. 10 thus reducing the disturbances caused.

Table 5.2 of the WYG noise survey provides an overview of the predicted levels of noise associated with the construction. The majority of the works is shown to be far below the maximum noise criteria set out within BS 5228-1 of 75dB(A). Receptors 12, 13 and 14 have been identified as the most susceptible. It is not anticipated that noise levels will exceed the maximum permitted level at these receptors; however monitoring will be undertaken and if noise levels are found to exceed the maximum criteria all associated works will be stopped. Suitable measures will then be implemented to reduce the impact on these receptors to below the maximum permissible value.

32. Please provide evidence that staff have been trained on BS 5228:2009

Full training was provided by the contractor to ensure that staff were made aware of potential noise and vibration issues. Reference is made to:

BS5228:2009 gives several examples of acceptable limits for construction or demolition noise. The most simplistic being based upon the exceedance of fixed noise limits and states in paragraph E.2:

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

9.22 Paragraph E.2 goes on to state:

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

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

These limits are for daytime working outside living rooms and offices."

33. Please provide details on how dust nuisance arising from dusty activities, on site, will be prevented.

Dust will be a factor during the demolition works, although the levels of dust emitted will be monitored at regular intervals throughout the works. In order to minimise the levels, we will spray a with fine water spray onto the materials prior to demolition as this will dampen the material and cause less dust fibres upon removal.

34. Please provide details describing how any significant amounts of dirt or dust that may be spread onto the public highway will be prevented and/or cleaned.

To reduce dust and dirt on the public highway to a minimum a 2.4m high solid site hoarding will be constructed around the site and the whole scaffold will be fully clad in Monaflex sheeting. A layer of polythene will be sandwiched between the lower lifts of boards to the front and rear scaffolds. During ground works phase a wheel wash is to be used on any vehicle that visits or leave site in order to prevent mud in Jamestown Road and the surrounding roads. Where necessary road sweepers will be hired to control excess debris.

35. Please provide details describing arrangements for monitoring of noise, vibration and dust levels.

The project manager will be responsible for checking the levels of noise, vibration and dust levels and will act where necessary to eliminate any issues arising.

36. Please confirm that a Risk Assessment has been undertaken at planning application stage in line with the GLA policy. The Control of Dust and Emissions During Demolition and Construction 2104 (SPG), that the risk level that has been identified, and that the appropriate measures within the GLA mitigation measures checklist have been applied. Please attach the risk assessment and mitigation checklist as an appendix.

A risk assessment for the site will be completed by the contractor and submitted to the CDM Co-ordinator/council prior to works commencing on site.

37. Please confirm that all of the GLA's 'highly recommended' measures from the SPG document relative to the level of risk identified in question 36 have been addressed by completing the GLA mitigation measures checklist.

Dust suppression techniques will be adopted. Wheel washing facilities will be employed to mitigate dust and materials being carried onto the local highway network.

An adequate supply of water will be supplied to cover the entire site area of works, with two taps in the basement/ground floor and one serving all floors in stair core 3.

38. If the site is a 'High Risk Site', 4 real time dust monitors will be required. If the site is a 'Medium Risk Site', 2 real time dust monitors will be required. The risk assessment must take account of proximity to sensitive receptors (e.g. schools, care homes etc.), as detailed in the SPG. Please confirm the location, number and specification of the monitors in line with the SPG and confirm that these will be installed 3 months prior to the commencement of works, and that real time data and quarterly reports will be provided to the Council detailing any exceedances of the threshold and measures that were implemented to address these.

The site is a "low" risk site.

39. Please provide details about how rodents, including rats, will be prevented from spreading out from the site. You are required to provide information about site inspections carried out and present copies of receipts (if work undertaken).

The site will be fully secured with hoarding and the site will be kept clean with all services removed or capped during works. Good housekeeping rules to be implemented.

Test baiting will be undertaken to ascertain the extent of any rodents currently occupying the site. Visual inspection will be carried out during the construction period to monitor the extent of rodents on site.

40. Please confirm when an asbestos survey was carried out at the site and include the key findings.

An asbestos survey has been completed on site by Demolition Contractor and removed as part of the enabling package. It is not envisaged that we will encounter any asbestos. However, in the event that asbestos is dis-covered post demolition then it will be isolated, classified and all removal will be completed by a contractor licensed by the Health and Safety Executive and prior to any other works starting in these locations.

41. Complaints often arise from the conduct of builders in an area. Please confirm steps being taken to minimise this e.g. provision of a suitable smoking area, tackling bad language and unnecessary shouting.

A complaints book and signing in / out book will be utilized on site also to keep records of staff on site and also any complaints that neighbours / members of the public may have. The record of complaint should include the name of person wishing to issue the complaint, the date, the time, the nature of the complaint, and remedial action required to resolve the issue. This record should be regularly reviewed and any complaints dealt with and resolved promptly in order to keep disruption to a minimum and keep good neighbouring relations.

42. If you will be using non-road mobile machinery (NRMM) on site with net power between 37kW and 560kW it will be required to meet the standards set out below. The standards are applicable to both variable and constant speed engines and apply for both PM and NOx emissions.

From 1st September 2015

(i) Major Development Sites – NRMM used on the site of any major development will be required to meet Stage IIIA of EU Directive 97/68/EC

(ii) Any development site within the Central Activity Zone - NRMM used on any site within the Central Activity Zone will be required to meet Stage IIIB of EU Directive 97/68/EC

From 1st September 2020

(iii) Any development site - NRMM used on any site within Greater London will be required to meet Stage IIIB of EU Directive 97/68/EC

(iv) Any development site within the Central Activity Zone - NRMM used on any site within the Central Activity Zone will be required to meet Stage IV of EU Directive 97/68/EC

Please provide evidence demonstrating the above requirements will be met by answering the following questions:

a) Construction time period (1st September 2015 – 17th September 2017):

b) Is the development within the CAZ? (No):

c) Will the NRMM with net power between 37kW and 560kW meet the standards outlined above? N/A

d) Please provide evidence to demonstrate that all relevant machinery will be registered on the NRMM Register, including the site name under which it has been registered: N/A

e) Please confirm that an inventory of all NRMM will be kept on site and that all machinery will be regularly serviced and service logs kept on site for inspection: N/A

f) Please confirm that records will be kept on site which details proof of emission limits, including legible photographs of individual engine plates for all equipment, and that this documentation will be made available to local authority officers as required: N/A

SYMBOL IS FOR INTERNAL USE

Agreement

The agreed contents of this Construction Management Plan must be complied with unless otherwise agreed in writing by the Council. This may require the CMP to be revised by the Developer and reapproved by the Council. The project manager shall work with the Council to review this Construction Management Plan if problems arise in relation to the construction of the development. Any future revised plan must be approved by the Council in writing and complied with thereafter.

It should be noted that any agreed Construction Management Plan does not prejudice further agreements that may be required such as road closures or hoarding licences.

Please notify that council when you intend to start work on site. Please also notify the council when works are approximately 3 months from completion.

Signed: ……

Date: ……31/10/2017……..

Print Name: ……Chris Slack……..

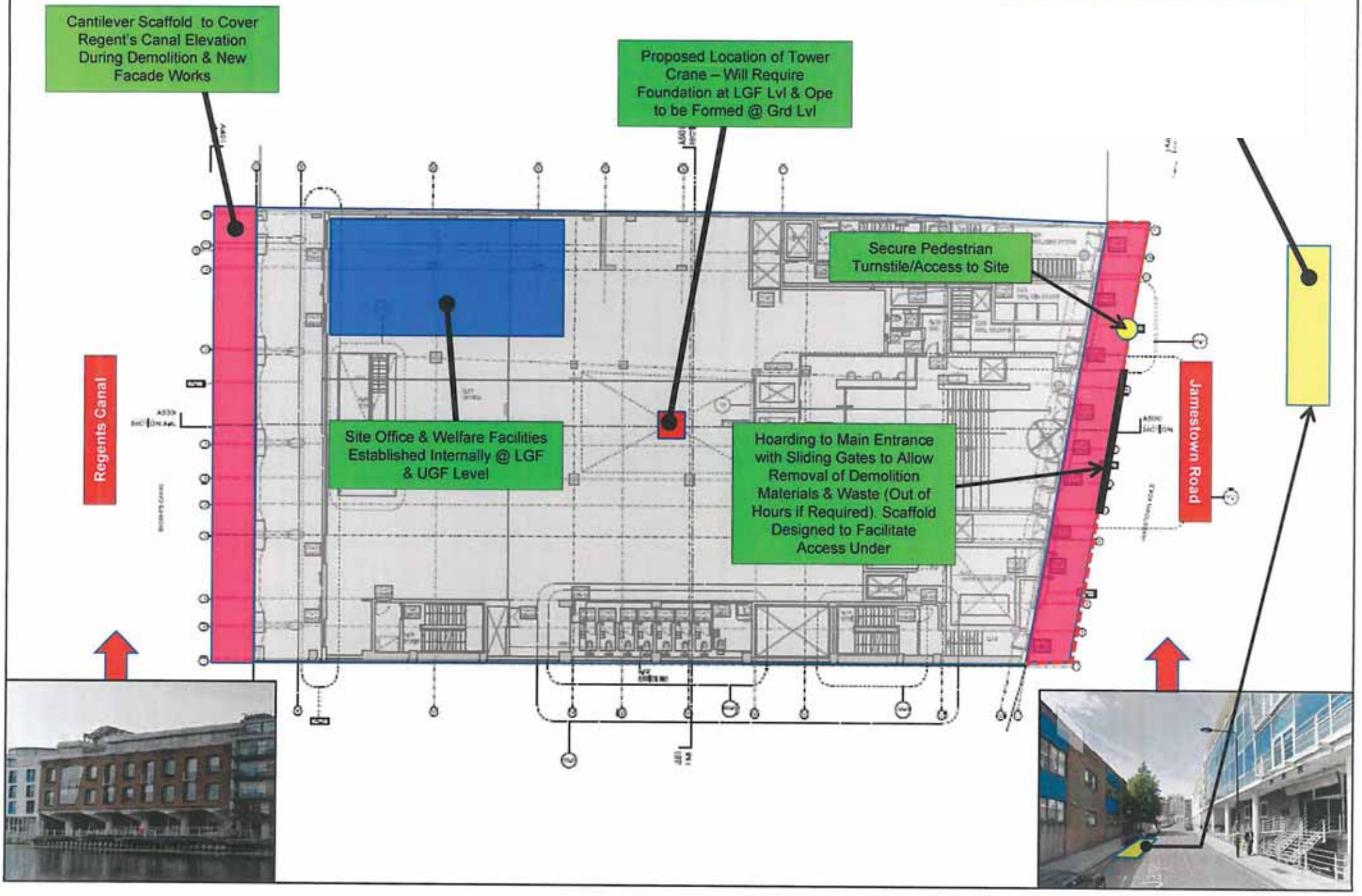
Position: ……Associate Transport Planner……

Please submit to: planningobligations@camden.gov.uk

End of form.

Bewlay House, 32 Jamestown Road - Outline Logistics Plan

HOC UK Ltd
Building Contractors



HOC-P067-SKT-0001

HOC UK Ltd
Building Contractors

LOGISTICS & TRAFFIC MANAGEMENT PLAN

PROJECT: Jamestown Road

Prepared By:	Name:	Signature:
James Hart	Paul Gent	

Reviewed By:	Name:	Signature:
Project Manager	Paul Gent	
Contracts Director	Colin Potts	
Safety Manager/Advisor:	Cydni Buxton	

Revision Records				
Version No	Issue Date	Pages / Section Amended	Prepared by	Reviewed by
1	15/07/2015	Original	Michael Gordon	
2	28/07/2015	Revision	James Hart	
3				
4				

Distribution of Controlled Copies			
Issued Copy No	Issue Date	Recipient Name	Company Name
1	17/7/15	John Richmond	London Cost
2	17/7/15	Barry Lowther	Progic Ltd.
3	17/7/15	Geoffrey Springer	L&R
4			
5.			
6.			
7.			

Index

1.0 Introduction

The following information provides guidance for the management of site traffic to be attributed to the proposed construction works at the site on 32 Jamestown Road. The Logistics and Traffic Management Plan is to be read in conjunction as part of the Construction Phase Health and Safety Plan which is to be developed in line with duties scheduled under Regulation 23 of the Construction (Design and Management) Regulations 2007 prior to works commencing at the site and will be updated every month to coincide with any changes to the development construction phase and site personnel.

1.1 Purpose

The purpose of this document is to assist with the planning of traffic management arrangements and preparation for proposed construction works at the site on 32 Jamestown Road.
The document will assist with communication of proposed arrangements to neighbouring property occupiers and other persons affected by the works. This will include (but will not be strictly limited to):

- London and Regional
- London Cost
- Progic Ltd CDM Co-ordinators

1.2 References

This Traffic Management Plan is prepared with reference to the following documents:

HS(G)136	Workplace Transport Safety
HS(G)144	The Safe Use of Vehicles on Construction Sites
HS(G)150	Health and Safety in Construction
HS(G)151	Protecting the Public – Your Next Move
L144	Managing Health and Safety in Construction

The following legislation is applicable to the management of traffic during the undertaking of construction works:

New Roads and Street Works Acts 1991
To ensure any temporary traffic arrangements meet with required standards.

Health and Safety at Work Etc Act 1974
To ensure Employers provide and maintain workplaces, equipment and systems of work so that they are, as reasonably practicable, safe to workers and others who may be affected by their operations.

Construction (Design and Management) Regulations 2007
To ensure risks are identified and addressed at the design stages and relevant risk information is communicated to all parties and to ensure the effective management of health and safety throughout the whole project.

Management of Health and Safety at Work Regulations 1999
To identify risks and institute safety management systems through provision of information and training.

Control of Substances Hazardous to Health Regulations 2002
To identify, reduce and monitor risks from potentially hazardous substances and materials.

2.0 Outline Considerations

2.1 Surrounding Environment

The site is bounded by the Regent Canal to the north, a party wall with Holiday Inn (no. 30 Jamestown Road) to the East, a further party wall with a mixed office and residential block of 14 flats "The Iceworks" (34-36 Jamestown Road) to the west and Jamestown Road to the south.

Jamestown Road can be accessed via Camden High Street, Oval Road and Arlington Road, it is 20 mph speed limit and a two way traffic flow with residential permit parking bays. The road is occupied by mixture of restaurants, commercial offices, terraced residential houses and flats.

Site Location – Jamestown Road, Camden Town, London

Aerial view of Site with premises highlighted in red (Also showing 30 and 34-36 Jamestown Road)

Original front elevation of site before demolition works, hoarding and scaffold erection

2.2 Surrounding Environment Key Considerations

Protection of Pedestrians within Surrounding Streets

The traffic route has been devised and will be adhered to in order to prevent traffic approaching from various routes and to provide familiarisation to repeat drivers.
A banks-man will be present at the material drop off zone at the front of the building to guide vehicles in and around of the site in a controlled manner without risk to pedestrians and vehicular traffic.

Protection of Other Road Users along Jamestown Road

HOC UK propose to use the front of the site as the holding area of vehicles prior to their delivery/discharge of materials to site.

A banks-man will be present at the material drop off point at all times to ensure safe passage of deliveries.

Deliveries will pull up on Jamestown Road and make themselves known to the banks-man who will guide them onto site holding area. Banksman will hold pedestrian traffic from using the footpath traversing the site entrance until it is safe for them to pass again.

Limitations of Vehicle Use

Due to the limited turning clearance within the site and surrounding area vehicles attending the site may be limited to rigid type transportation only and parked directly in front of premises for unloading and not obstruct neighbouring premises.

Removal of controlled waste from site

The following documentation will be checked, copied and retained on site before allowing anyone to remove 'controlled waste' from site.

1. The person or company carrying the waste offsite must be registered with the local Waste Regulatory Authority and be able to produce a copy of the registration document.

2. Confirmations that the waste is being transferred to an authorised person, tip or transfer station.

3. Details of the waste material have been passed onto the carrier via a Waste Transfer Note with a covering order.

4. All vehicles must be covered by the licensed carrier with netting or sheeting prior to removal from site.

Access for Emergency Vehicles

The main site entrance will be kept clear and free of any obstructions, such as delivery vehicles to ensure that access can be gained to the site areas and along Jamestown Road at all times.

2.3 Requirements to achieve proposed arrangements

Provision of a suitably competent and trained Banks man. The banks man will wear full PPE including hard hat, hi- visibility vest or jacket and protective footwear. The banks man will maintain visual contact with the driver at all times giving clear instructions by hand signals or vocal commanded.

3.0 Traffic Routes

1. Vehicles will call the Site Supervisor 30 minutes prior to arrival at site. The scheduling of vehicles will be arranged to minimise the attendees at site at any one time.

2. Access will be provided from Jamestown Road parking directly outside site (Refer to Figure 1 break down of delivery instructions).

3. Vehicles will traverse along Jamestown Road and where required (as a result of a vehicle being present at the site) will be held marshalled along Jamestown Road and then in to the drop off point.

4. Delivery vehicles must be off loaded immediately and manoeuvred away from site

5. Upon completion, the vehicle will leave the site in forward gear, under the control of the site banksman who will temporarily halt pedestrian traffic to allow for safe exit. The vehicle will drive off on Jamestown Road.

Figure 1– Traffic routing for the construction works

By implementing the suspension of parking bays (allocated by Camden Town Council) opposite to the site at 32 Jamestown Road, HOC UK Ltd as principal contractor will require deliveries where applicable to park directly outside the site following the flow of traffic. HOC UK Ltd have considered the Construction Logistics and Cyclist Safety (CLOCS) guidance and designed our delivery plans with pedestrian and cyclist warfare as paramount concern. Due to predominantly one way traffic flows throughout the arterial routes to site it is important to plan your journey and adhere to these directions to ensure the delivery vehicle is on the correct side of road on arrival for unloading and not obstruction neighbouring premises. This will ensure safe and efficient unloading with vehicle doors aligned with site entrance and minimise disruption once the supplier has completed delivery and pulls away in the correct direction of traffic, to either exit via Arlington Road or Camden High Street or A4201 which provides further options to leave Camden. The Red route highlights the preferred access/entrance to the site for suppliers by driving one way either from Oval Road or in Orange shows a secondary route from the A4201 onto Gloucester Crescent and Oval Road. The Green route shows multiple options for exiting the site, but once again it is important that all suppliers avoid the use of 3 point turns, double parking if attempt to change direction as a result of poor route planning.

Figure 1

Figure 2 Camden Town

Figure 3 London

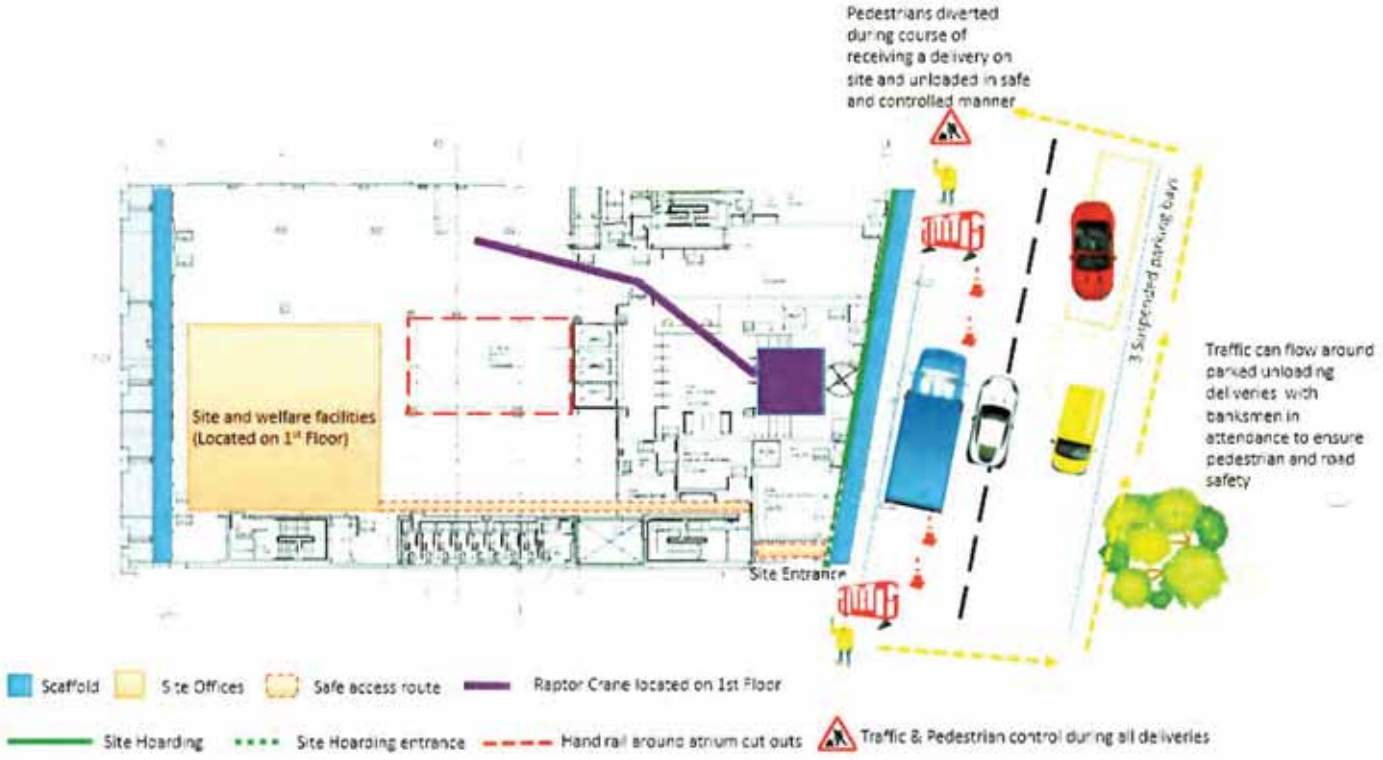
3.1 Proposed Delivery Schedule and Vehicle Sizes

Plasterbaord	Rigid Lorry
Blocks	Rigid Lorry
Steel	Rigid Lorry
Windows	Flat Bed Van
Scaffolding	Rigid Lorry
Waste	Skip Lorry (8yd skips)
Roofing materials	Rigid Lorry
Timber	Rigid Lorry
Misc	Van

3.2 Site Facilities and Logistics Plan

- **Site Hoarding-** Prevents unauthorised access to site and highlighted in light green with dotted line showing the entrance gates to the lower ramp which will be available for small deliveries and a separate pedestrian access door is also provided to access segregated pedestrian routes.
- **Site Pedestrian Routes –** Are the red dotted areas within the site boundary (from site entrance to, nearest stairwell and across first floor to site offices on the site logistics plan (shown below) and will be segregated from vehicular transport routes.
- **Site Welfare facilities** - are shown in light red for further description and layout details refer to 3.25 "Welfare and First Aid" of Construction Phase Plan.
- **Scaffold** - Both front and rear elevations have scaffolding (Light Blue shading) to provide access and pedestrian protection
- **Crane –** Is awaiting final specification and temporary works design but has been proposed to be located on 2nd floor (Shown in purple) with a proposed 30m reach and without over sailing rights. For unloading and distributing materials across site, used in conjunction with additional mechanical lifting aids for further horizontal distribution.
- **Traffic management –** Refer to Figure 1 of section 3.0 Traffic Routes for overview of preferred delivery routes to site from surrounding roads. The site logistics plan below displays how the 3 suspended bays enable continued traffic flow around site deliveries with a trained banks able to supervise unloading and re-direct pedestrian traffic when necessary and safe to do so.

Site Logistics Plan



4.0 Rules for Drivers

All drivers on site are required to comply with relevant site worker rules and the following site safety rules:

- All drivers must use the specific access route to the site,
- All drivers must comply with the "Traffic Management Controls" in place.
- All drivers must report to the holding area and wait for instructions before proceeding.
- Drivers are required to wear high visibility clothing when not in their cab.
- Drivers who have not attended the project health & safety induction must remain with their vehicles unless escorted.
- The speed limit, one way systems, prohibited areas and reversing procedures must be strictly adhered to. The speed limit on site is 5mph.
- The instructions of relevant banksmen must be followed.
- All vehicle/plant lights, warning lights and other warning devices must be fully operational.

Arrangements for ensuring the safety of visitors including pedestrians

- Visitors must be directed to the site offices via pedestrian gated site access route.
- Visitors to the site must not be allowed to enter the designated construction areas of the site without being escorted at all times by a person who has attended the site induction.
- Relevant safety instructions must be given by the escort.
- The visitors escort must provide relevant personal protective equipment such as hard hat, hi-vis vest and steel protective toe cap boots.

Safety signage

Safety signage must be used to inform all pedestrians of the desired route which is to be taken to avoid interaction with delivery and collection vehicles. The Project Manager and Safety Manager will ensure that this is completed with the aid of the Construction Manager who is responsible for the contracted works to each relevant building under construction.

Visual and Audible Alarms

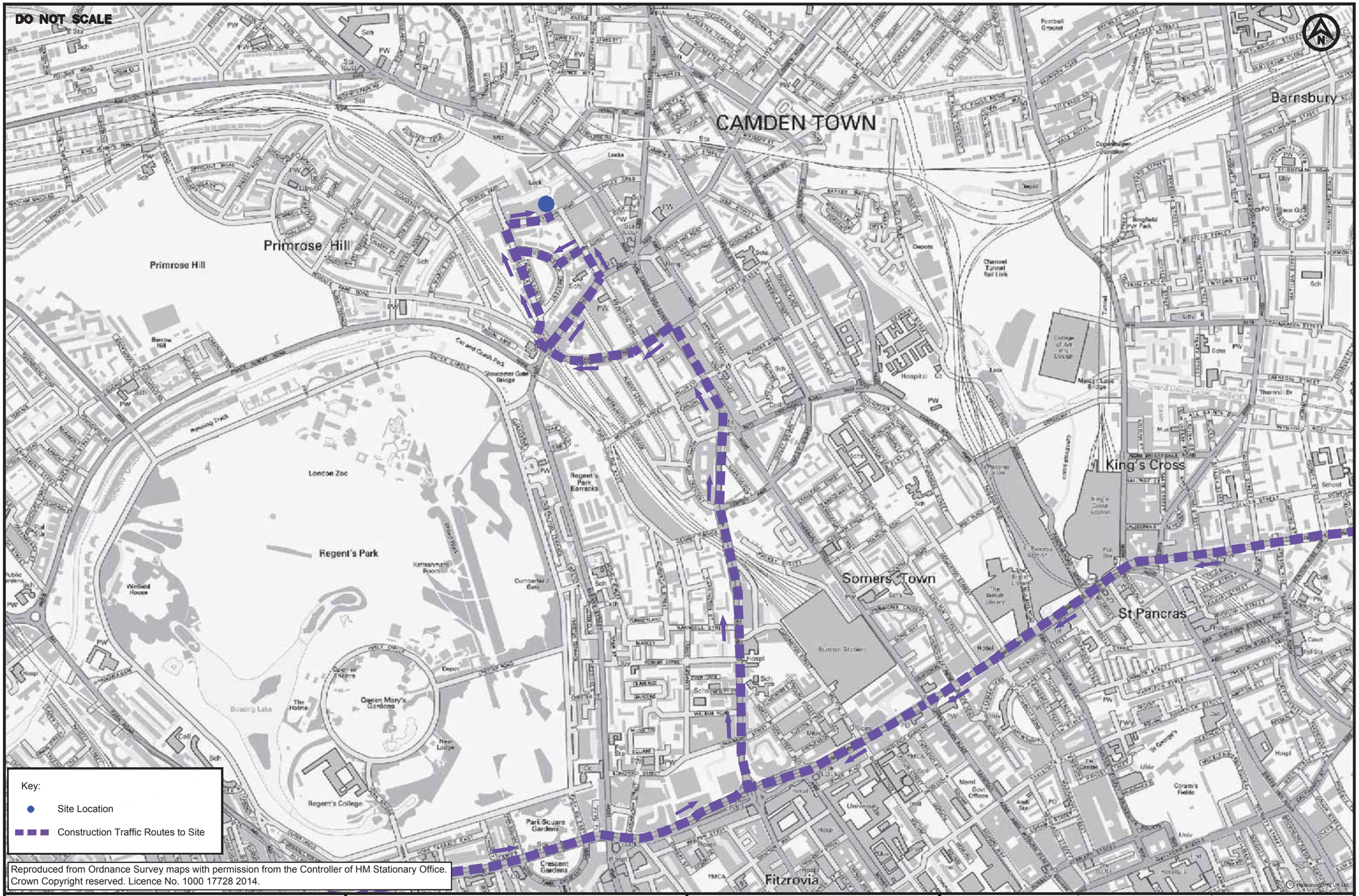
All site vehicles such as excavators, forklifts, mobile cranes, dumpers, rollers must have a flashing beacon so that they are visible to others on site. These beacons must be in use whilst the machine is in use.

Any reversing vehicles must have audible alarms to warn others on site of the intent to reverse.

Defining material routes

Footpaths must be kept clear and free of all obstructions and construction activities.
Barriers or pedestrian fencing must be erected complete with warning and mandatory signage to prevent unauthorised access. Clear visible barriers in place to define material route.

DO NOT SCALE



TITLE

CONSTRUCTION TRAFFIC ROUTES TO SITE
CONSTRUCTION MANAGEMENT PLAN

PROJECT

32 JAMESTOWN ROAD, CAMDEN

Royal HaskoningDHV
Enhancing Society Together
Blays House, Wick Road
Englefield Green, Egham
Surrey TW20 0HJ
Tel +44(0)1932 569566
www.royalhaskoningdhv.com

JOB No.	PB6633	DATE	JUL '17	SCALE	1:10,000
DRAWN	SAR	CHECKED	CS	PASSED	CS
AUTOCAD REF.		DRG No.	PB6633-CMP-01	REV	P1

DO NOT SCALE

CAMDEN TOWN

Primrose Hill

Regent's Park

London Zoo

Somers Town

Fitzrovia

King's Cross

St Pancras

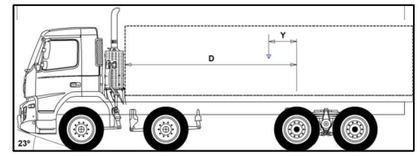
Barnsbury

Key:

- Site Location
- Construction Traffic Routes from Site

TITLE: CONSTRUCTION TRAFFIC ROUTES FROM SITE CONSTRUCTION MANAGEMENT PLAN	PROJECT: 32 JAMESTOWN ROAD, CAMDEN	Royal HaskoningDHV Enhancing Society Together Blays House, Wick Road, Englefield Green, Egham, Surrey TW20 0HJ Tel +44(0)1932 569566 www.royalhaskoningdhv.com	JOB No. PB6633 · DATE NOV '17 · SCALE 1:10,000 DRAWN SAR · CHECKED CS · PASSED CS AUTOCAD REF. · DRG No. PB6633-CMP-02 · REV P2

DO NOT SCALE



Volvo FMX11 32T Tipper	
Overall Length	9.165m
Overall Width	2.490m
Overall Body Height	0.436m
Min Body Ground Clearance	0.436m
Track Width	2.490m
Lock to lock time	4.00s
Wall to Wall Turning Radius	11.050m

1 to 14
The Ice Works
34 to 36

Hotel

22

VEHICLE PULLS UP OUTSIDE THE SITE ON JAMESTOWN ROAD TO DELIVER TO THE SITE.

+ 30.3m

MOTORCYCLES

31

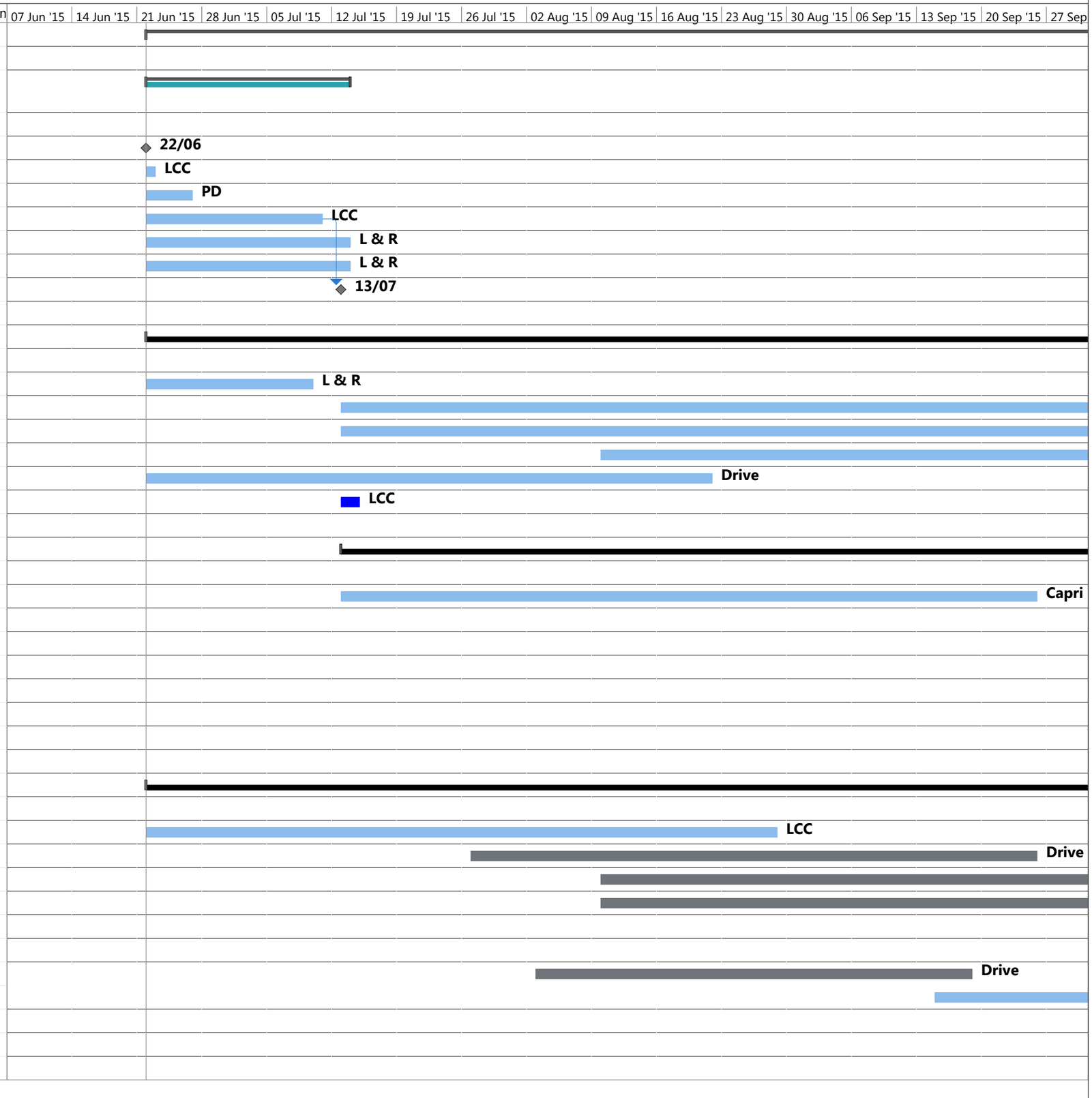
TITLE	PROJECT				
CONSTRUCTION SITE ACCESS	32 JAMESTOWN ROAD				
		JOB No. PB6633	DATE 02/10/2017	SCALE 1:250	
		DRAWN JW	CHECKED CS	PASSED CS	
		AUTOCAD REF. PB6633 SK01.DWG	DRG No. SK01	REV P0	

Royal HaskoningDHV
Enhancing Society Together
2 Abbey Gardens
Great College Street
Westminster
London, SW1P 3NL
Tel +44(0)207 222 2115
www.royalhaskoningdhv.com

LONDON COST CONSULTANCY / CAPRI

32 JAMESTOWN ROAD - CONSTRUCTION PROGRAMME

ID	Task Name	Start	Finish	Resource Nan
0	**GENERAL WORKS**	**Mon 22/06/15**	**Thu 31/08/17**	
1				
2	**PRE-CONSTRUCTION**	**Mon 22/06/15**	**Mon 13/07/15**	
3				
4	Letter of Intent Issued	Mon 22/06/15	Mon 22/06/15	L & R
5	Pre-construction HS Plan	Mon 22/06/15	Mon 22/06/15	LCC
6	F10 issued	Mon 22/06/15	Fri 26/06/15	PD
7	CMP	Mon 22/06/15	Fri 10/07/15	LCC
8	Client appointments	Mon 22/06/15	Mon 13/07/15	L & R
9	Client Information	Mon 22/06/15	Mon 13/07/15	L & R
10	Site possession	Mon 13/07/15	Mon 13/07/15	L & R
11				
12	**DESIGN**	**Mon 22/06/15**	**Fri 16/06/17**	
13				
14	Appoint designers	Mon 22/06/15	Thu 09/07/15	L & R
15	Architect	Mon 13/07/15	Fri 18/12/15	BAA
16	Structural Engineer	Mon 13/07/15	Fri 18/12/15	EXP
17	MEP Design	Mon 10/08/15	Fri 18/12/15	NDY
18	Temp works design	Mon 22/06/15	Fri 21/08/15	Drive
19	Apply for crane road closure	Mon 13/07/15	Tue 14/07/15	LCC
20				
21	**UTILITIES**	**Mon 13/07/15**	**Fri 16/06/17**	
22				
23	Applications	Mon 13/07/15	Fri 25/09/15	Capri
24	UKPN new substation	Mon 12/10/15	Thu 14/01/16	
25	Switch from old to new SS	Wed 24/08/16	Tue 30/08/16	UKPN
26	Decommission old SS	Wed 31/08/16	Mon 05/09/16	UKPN
27	Water - New Fire Main	Mon 12/06/17	Fri 16/06/17	TWA
28	Gas	Mon 23/01/17	Thu 25/05/17	Total
29	BT	Mon 13/02/17	Sat 18/03/17	BT
30				
31	**STRUCTURAL WORK**	**Mon 22/06/15**	**Wed 09/11/16**	
32				
33	Structural Surveys	Mon 22/06/15	Fri 28/08/15	LCC
34	Drainage Alterations	Mon 27/07/15	Fri 25/09/15	Drive
35	Substructure works	Mon 10/08/15	Thu 22/10/15	Drive
36	Lift Pits	Mon 10/08/15	Fri 16/10/15	Drive
37	RC infill slabs FF-3F	Mon 05/10/15	Fri 15/01/16	Drive
38	New RC stair cores / Risers	Mon 23/11/15	Fri 29/01/16	Drive
39	Tower crane base	Mon 03/08/15	Fri 18/09/15	Drive
40	Road closure notice	Tue 15/09/15	Fri 23/10/15	City
41	Erect Tower Crane	Mon 26/10/15	Mon 26/10/15	City
42	Crane hire period	Wed 28/10/15	Fri 28/10/16	City
43	RC stair core 1 - LGF to GF	Mon 02/11/15	Fri 18/12/15	Drive



ID	Task Name	Start	Finish	Resource Nan
44	RC stair core 2 - 3f to 4f	Mon 30/11/15	Fri 15/01/16	Drive
45	Steel structure 4F	Mon 18/01/16	Fri 11/03/16	Drive
46	New 4F slab	Mon 14/03/16	Fri 29/04/16	Drive
47	RC roof & overhang to SC 2	Tue 26/04/16	Thu 26/05/16	Drive
48	Cut & raise door openings SC2	Mon 23/05/16	Mon 13/06/16	Drive
49	Scaffold to holiday inn*	Fri 17/06/16	Thu 30/06/16	Access
50	RC stair core 3 - Stair flights	Mon 16/05/16	Fri 24/06/16	Drive
51	RC walls 3 - 4th to 5th flr	Fri 01/07/16	Thu 14/07/16	Drive
52	RC lid / lift over-run	Fri 15/07/16	Thu 21/07/16	Drive
53	Scaff design for cantelever	Tue 19/07/16	Tue 02/08/16	
54	Extend scaff to holiday inn*	Wed 03/08/16	Sat 06/08/16	Access
55	Masonry infill to east elev*	Mon 08/08/16	Wed 10/08/16	BBC
56	Windposts / Masonry balconies 4F	Mon 15/08/16	Fri 19/08/16	LCC/BBC
57	Masonry to west wall 4F	Mon 11/07/16	Tue 16/08/16	BBC
58	Repairs to party walls gen	Thu 14/07/16	Fri 19/08/16	BBC
59	Structural steelwork 4F 5F	Wed 17/08/16	Wed 31/08/16	AFPL
60	Metal decking 5F	Mon 22/08/16	Tue 30/08/16	AFPL
61	Metal decking roof	Tue 30/08/16	Sat 03/09/16	AFPL
62	Secondary steels for atrium, gutters, roof plant etc?	Fri 02/09/16	Tue 13/09/16	JPS
63	Install roof edge protection	Wed 14/09/16	Wed 14/09/16	Access
64	Lytag concrete fifth floor slab	Thu 15/09/16	Wed 21/09/16	Drive
65	Lytag concrete roof slab	Wed 28/09/16	Sat 01/10/16	Drive
66	GF - Cut & remove slab in reception	Tue 06/09/16	Thu 08/09/16	Drive
67	Demolish extg sub-station	Fri 09/09/16	Sat 10/09/16	Drive
68	Form DS beam & new cols LGF	Mon 12/09/16	Mon 19/09/16	Drive
69	New RC slabs	Tue 20/09/16	Sat 24/09/16	Drive
70	Remove tower crane	Sat 29/10/16	Tue 01/11/16	City
71	Remove TC support frame LGF	Wed 02/11/16	Thu 03/11/16	Drive
72	Raise birdcage scaffold	Fri 04/11/16	Wed 09/11/16	Access
73				
74	**ENVELOPE**			
75				
76	**Front & Real Elevations**	Mon 15/08/16	Tue 22/11/16	
77	Windposts / Blockwork to front elev	Mon 15/08/16	Wed 31/08/16	BBC / Admiral
78	Ditto rear elevation	Wed 17/08/16	Sat 27/08/16	BBC / Admir
79	Masonry 8 lifts to front & rear - FF to Roof	Sat 20/08/16	Tue 10/01/17	BBC / Admiral
80	Strike front & rear elev	Wed 11/01/17	Fri 28/04/17	Admiral
81	Complete masonry to GF front elev	Wed 01/03/17	Tue 09/05/17	BBC
82	Revolving Door	Tue 21/02/17	Sat 25/02/17	BEL
83	Curtain Walling to GF Front	Mon 29/05/17	Thu 29/06/17	Solair

ID	Task Name	Start	Finish	Resource Nan
84	Complete masonry to GF rear elev	Mon 13/02/17	Wed 03/05/17	BBC
85	*Curtain Walling to GF rear*	Mon 05/06/17	Thu 29/06/17	Solair
86	Fit support angles / brackets	Wed 05/10/16	Wed 19/10/16	JPS
87	*Curtain Walling F1-3*	Tue 11/10/16	Thu 27/10/16	Solair
88	*GRC Spandrel panels*	Sat 18/03/17	Fri 26/05/17	CMone
89	Front Entrance Canopy	Mon 12/06/17	Thu 29/06/17	JPS
90				
91	**Roof Areas**	Mon 03/10/16	Fri 14/07/17	
92	Scaffold access to 5f and main roof	Mon 03/10/16	Tue 04/10/16	Access
93	Main roof edge / gutter detail	Wed 05/10/16	Mon 10/10/16	TBA
94	Brise Soleil steel support stubs	Tue 11/10/16	Sat 15/10/16	TBA
95	Vapour barrier to main roof	Mon 17/10/16	Tue 18/10/16	TBA
96	PV support posts	Wed 19/10/16	Mon 24/10/16	Capri
97	Mansafe support posts	Wed 19/10/16	Mon 24/10/16	TBA
98	Green wall / planter metalwk	Wed 19/10/16	Mon 24/10/16	TBA
99	Main roof insulation / finish	Tue 25/10/16	Fri 04/11/16	TBA
100	Protect roof finish	Sat 05/11/16	Sat 05/11/16	LCC
101	PV panels & cabling	Mon 07/11/16	Fri 11/11/16	Capri
102	Mansafe / screens 2nd fix	Mon 07/11/16	Fri 11/11/16	TBA
103	Planting to troughs?	Fri 11/11/16	Fri 11/11/16	TBA
104	Strike scaffold to main roof	Sat 12/11/16	Mon 14/11/16	Access
105	*Curtain Walling to 5F*	Tue 15/11/16	Fri 13/01/17	TBA
106	Brise Soleil to main roof	Sat 14/01/17	Thu 19/01/17	TBA
107	5F roof edge / gutter detail	Fri 20/01/17	Fri 27/01/17	TBA
108	5F Brise Soleil support stubs	Sat 28/01/17	Thu 02/02/17	TBA
109	Vapour barrier to 5F terraces	Fri 03/02/17	Mon 06/02/17	TBA
110	5F Balustrading / planters / screen first fix	Tue 07/02/17	Sat 11/02/17	TBA
111	5F Insulation / roof finish to terraces & plant plinths	Sun 12/02/17	Mon 20/02/17	TBA
112	Temp protect roof finish	Tue 21/02/17	Tue 21/02/17	TBA
113	5F Balustrading / Plant boxes / screens 2nd fix	Wed 22/02/17	Mon 27/02/17	TBA
114	*Curtain Walling to 4F*	Mon 22/06/15	Tue 08/09/15	TBA
115	Strike scaffold to 5F	Mon 24/10/16	Tue 25/10/16	Access
116	Brise Soleil to 5F	Wed 26/10/16	Mon 31/10/16	TBA
117	Vapour barrier to 4F terraces	Tue 01/11/16	Thu 03/11/16	TBA
118	4F Balustrading / planters / screen first fix	Fri 04/11/16	Wed 09/11/16	TBA
119	4F Insulation / roof finish to terraces	Thu 10/11/16	Fri 18/11/16	TBA
120	Temp protect roof finish	Sat 19/11/16	Sat 19/11/16	TBA
121	4F Balustrading / Plant boxes / screens 2nd fix	Mon 21/11/16	Tue 13/12/16	TBA

ID	Task Name	Start	Finish	Resource Nan
122	4F 5F Terrace Decking / Protect	Tue 30/05/17	Mon 26/06/17	TBA
123	4F 5F Green roof areas	Mon 19/06/17	Fri 14/07/17	TBA
124	5F M & E Roof Plant Equipment	Tue 21/02/17	Thu 01/06/17	Capri
125	Smoke vent stair core 3	Tue 30/05/17	Mon 19/06/17	Capri
126				
127	**Atrium**	Fri 04/11/16	Fri 05/05/17	
128	Roof Glazing	Thu 10/11/16	Thu 19/01/17	Vitrine
129	Roof Framing / Vent	Tue 15/11/16	Wed 01/02/17	TBA / Capri
130	Framing & plasterboard to columns	Sat 21/01/17	Fri 17/02/17	CMone
131	GRC Panels to Atrium	Sat 18/02/17	Thu 23/02/17	CMone
132	Vertical glazing (except lift door elev)	Fri 24/02/17	Fri 05/05/17	Vitrine
133				
134	**INTERNAL WORKS**	**Mon 22/06/15**	**Thu 31/08/17**	
135				
136	Expose piles & drive earth rods	Mon 08/08/16	Sat 10/09/16	Drive
137	Earthing connections & test	Mon 12/09/16	Thu 29/09/16	Capri
138	M & E Work to Risers	Wed 05/10/16	Thu 29/12/16	Capri
139	M & E First Fix	Mon 17/10/16	Fri 03/03/17	Capri
140	Fit out works WC Rooms all floors	Fri 21/10/16	Tue 07/03/17	
141	Complete blockwork to basement	Fri 04/11/16	Sat 04/02/17	BBC
142	M & E Basement Plant	Fri 16/09/16	Thu 06/04/17	Capri
143	M & E Second fix	Thu 15/12/16	Fri 05/05/17	Capri
144	Stair Finishes & Joinery	Wed 28/12/16	Sat 04/03/17	TBA
145	Stair Balustrades	Mon 16/01/17	Fri 17/02/17	TBA
146	Lift Installations	Mon 12/12/16	Thu 25/05/17	LS
147	Raised flooring to all floors	Sun 12/02/17	Fri 16/06/17	BAthgate
148	Fire Curtains	Thu 25/05/17	Wed 07/06/17	Cooper
149	Reception Area Fit Out	Mon 17/04/17	Thu 17/08/17	LCC
150	Cycle Store Fit Out	Mon 19/06/17	Fri 11/08/17	LCC
151	Testing & Commissioning	Thu 01/06/17	Wed 09/08/17	Capri
152	Snagging	Thu 27/07/17	Thu 24/08/17	LCC
153	Handover	Wed 16/08/17	Thu 31/08/17	LCC
154				
155	*Subject to Party Wall Awards & permission from adjoining owner	Mon 22/06/15	Mon 22/06/15	

LONDON COST CONSULTANCY / CAPRI

32 JAMESTOWN ROAD - CONSTRUCTION PROGRAMME

27 Sep '15 | 04 Oct '15 | 11 Oct '15 | 18 Oct '15 | 25 Oct '15 | 01 Nov '15 | 08 Nov '15 | 15 Nov '15 | 22 Nov '15 | 29 Nov '15 | 06 Dec '15 | 13 Dec '15 | 20 Dec '15 | 27 Dec '15 | 03 Jan '16 | 10 Jan '16 | 17 Jan '16 | 24 Jan '16 | 31 Jan '16 | 07 Feb '16 | 14 Feb '16 | 21 Feb '16 | 28 Feb '16 | 06 Mar '16 | 13 Mar '16 | 20 Mar '16

BAA

EXP

NDY

Capri

Drive

Drive

Drive

Drive

Drive

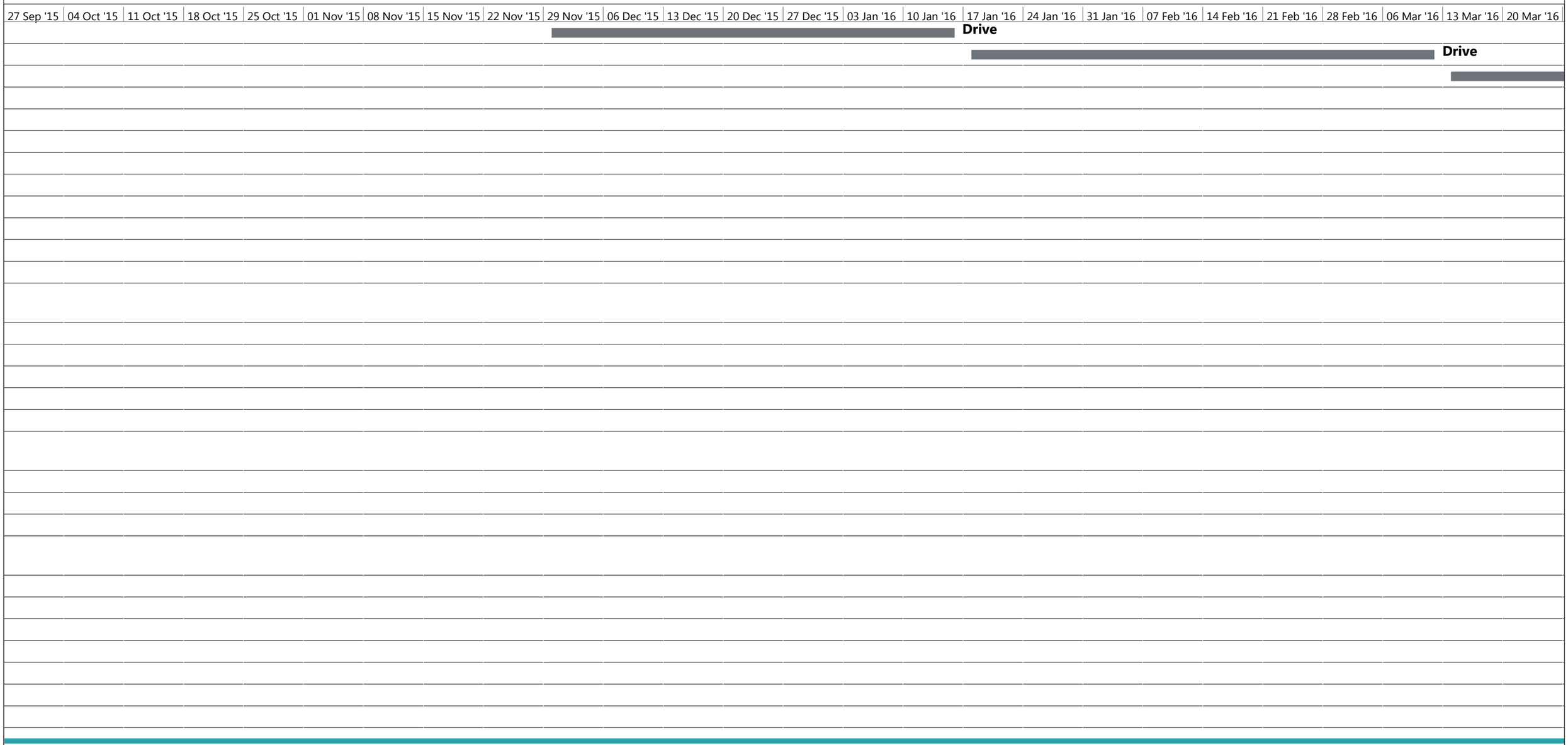
City

26/10

Drive

LONDON COST CONSULTANCY / CAPRI

32 JAMESTOWN ROAD - CONSTRUCTION PROGRAMME



LONDON COST CONSULTANCY / CAPRI

32 JAMESTOWN ROAD - CONSTRUCTION PROGRAMME

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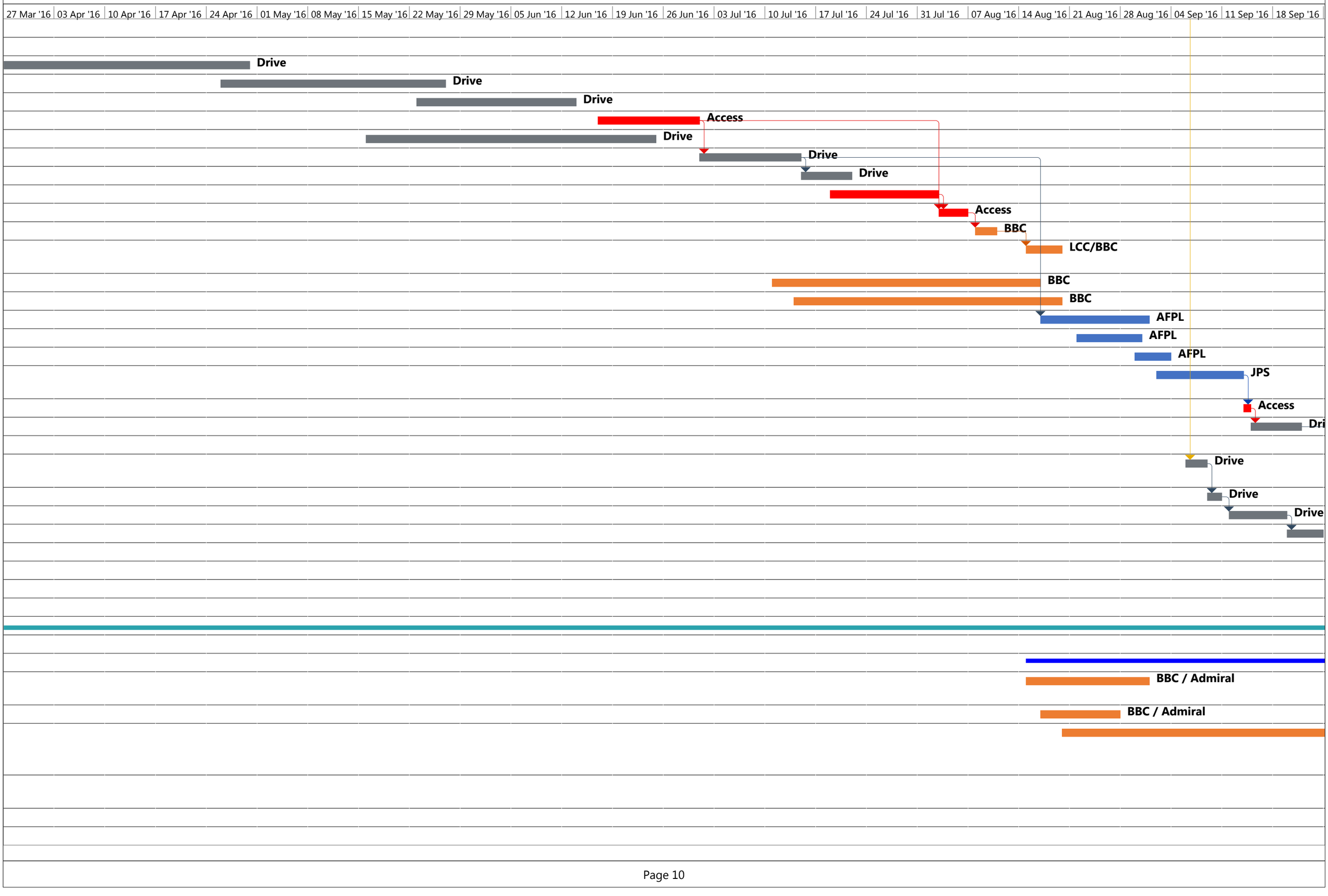
LONDON COST CONSULTANCY / CAPRI

32 JAMESTOWN ROAD - CONSTRUCTION PROGRAMME

27 Mar '16 | 03 Apr '16 | 10 Apr '16 | 17 Apr '16 | 24 Apr '16 | 01 May '16 | 08 May '16 | 15 May '16 | 22 May '16 | 29 May '16 | 05 Jun '16 | 12 Jun '16 | 19 Jun '16 | 26 Jun '16 | 03 Jul '16 | 10 Jul '16 | 17 Jul '16 | 24 Jul '16 | 31 Jul '16 | 07 Aug '16 | 14 Aug '16 | 21 Aug '16 | 28 Aug '16 | 04 Sep '16 | 11 Sep '16 | 18 Sep '16

LONDON COST CONSULTANCY / CAPRI

32 JAMESTOWN ROAD - CONSTRUCTION PROGRAMME



LONDON COST CONSULTANCY / CAPRI

32 JAMESTOWN ROAD - CONSTRUCTION PROGRAMME

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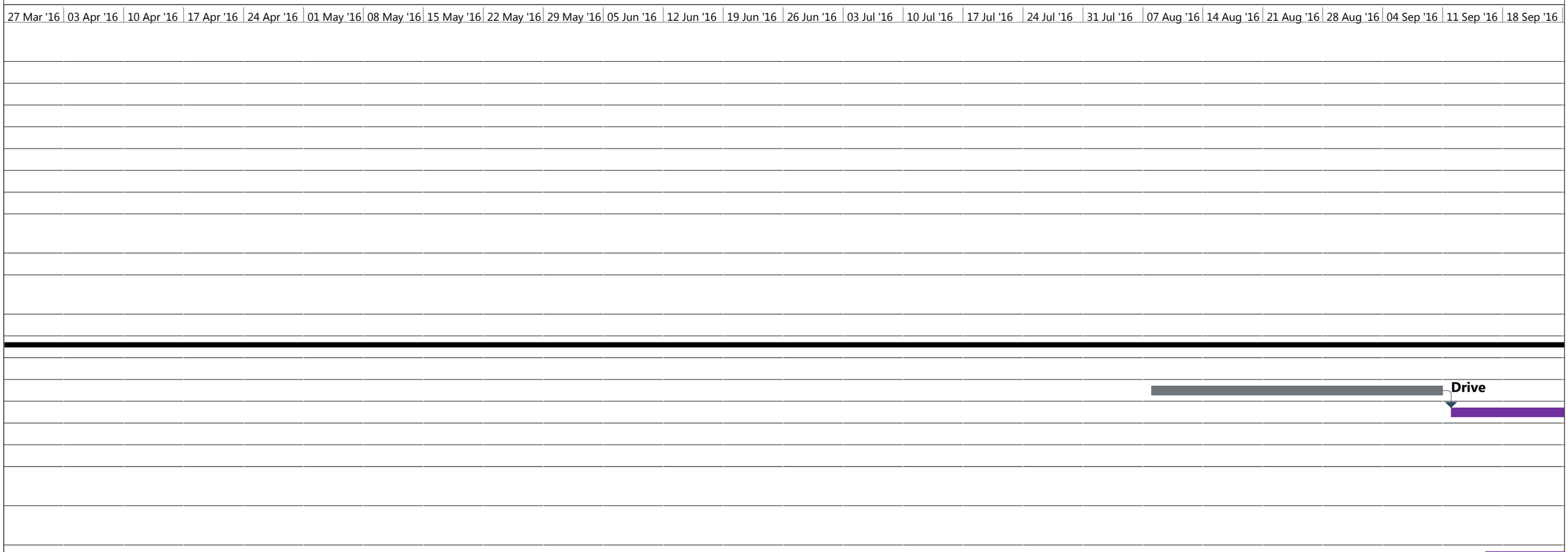
LONDON COST CONSULTANCY / CAPRI

32 JAMESTOWN ROAD - CONSTRUCTION PROGRAMME

27 Mar '16 | 03 Apr '16 | 10 Apr '16 | 17 Apr '16 | 24 Apr '16 | 01 May '16 | 08 May '16 | 15 May '16 | 22 May '16 | 29 May '16 | 05 Jun '16 | 12 Jun '16 | 19 Jun '16 | 26 Jun '16 | 03 Jul '16 | 10 Jul '16 | 17 Jul '16 | 24 Jul '16 | 31 Jul '16 | 07 Aug '16 | 14 Aug '16 | 21 Aug '16 | 28 Aug '16 | 04 Sep '16 | 11 Sep '16 | 18 Sep '16



LONDON COST CONSULTANCY / CAPRI

32 JAMESTOWN ROAD - CONSTRUCTION PROGRAMME

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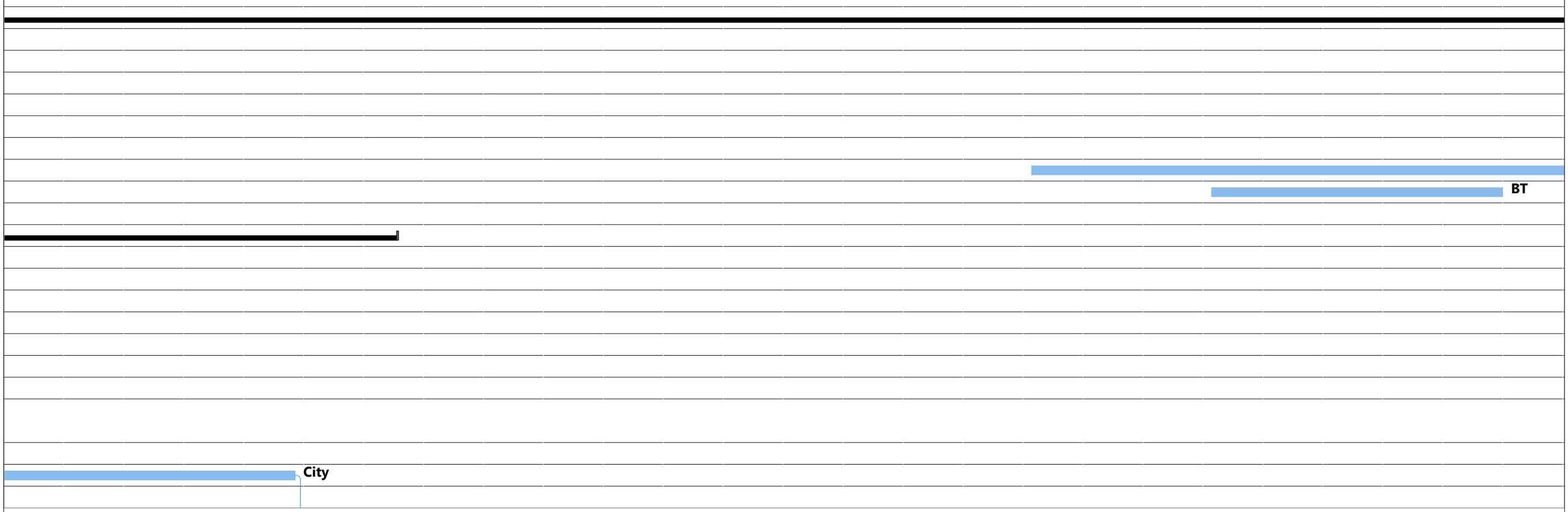

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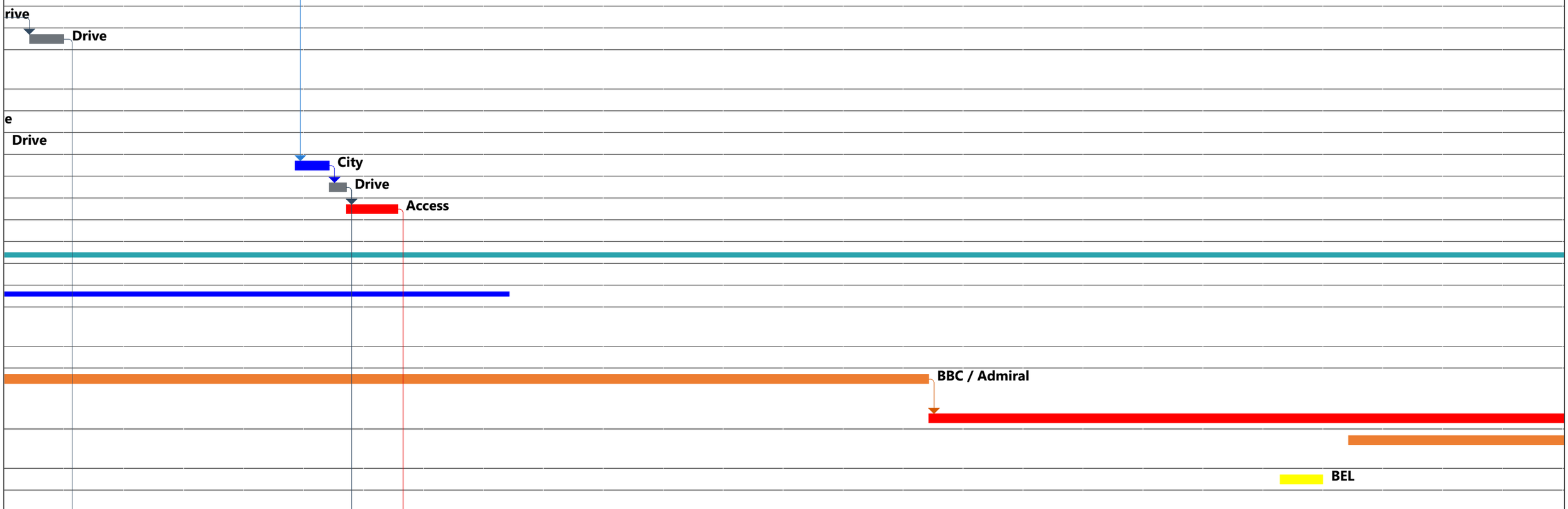
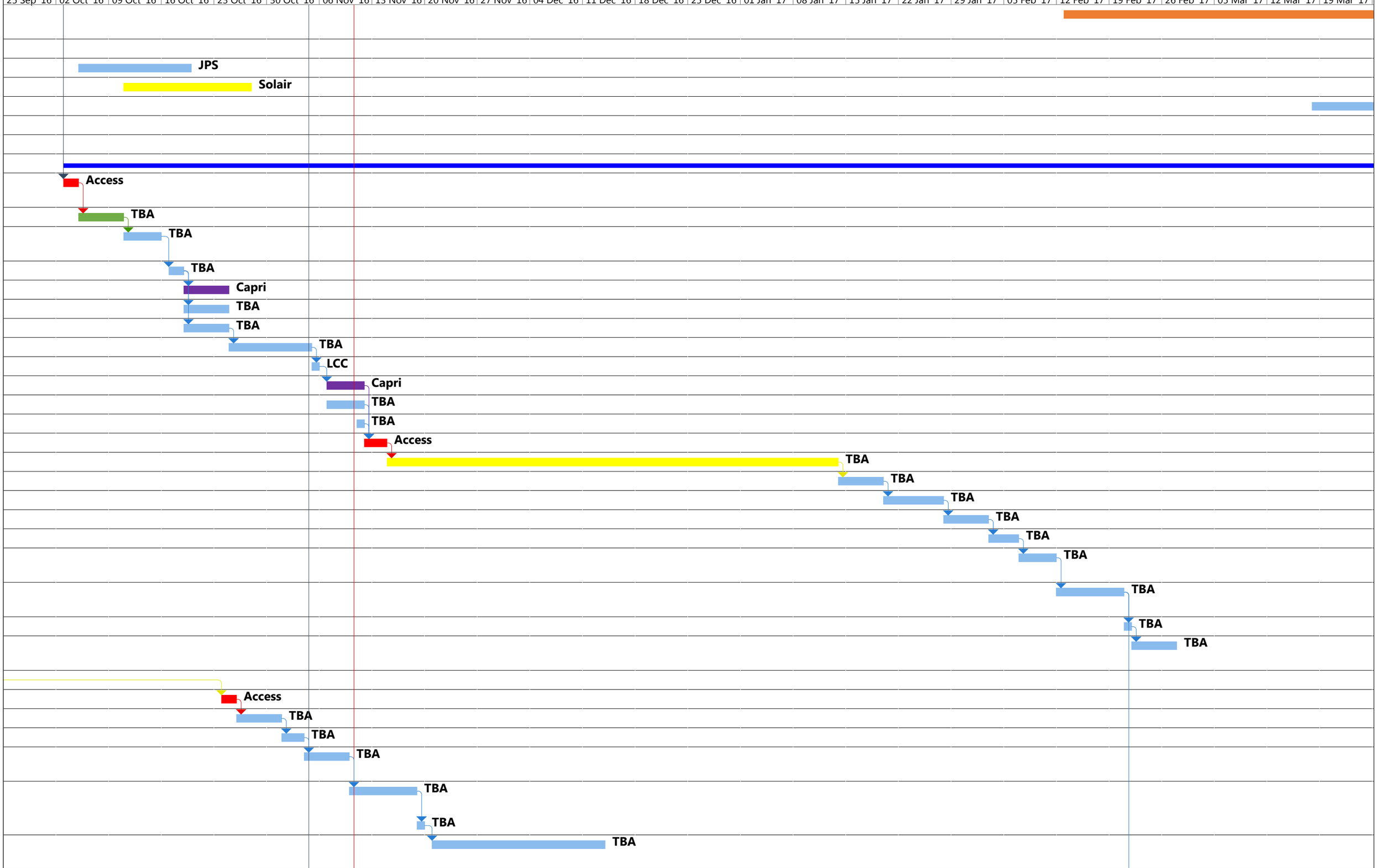
25 Sep '16 | 02 Oct '16 | 09 Oct '16 | 16 Oct '16 | 23 Oct '16 | 30 Oct '16 | 06 Nov '16 | 13 Nov '16 | 20 Nov '16 | 27 Nov '16 | 04 Dec '16 | 11 Dec '16 | 18 Dec '16 | 25 Dec '16 | 01 Jan '17 | 08 Jan '17 | 15 Jan '17 | 22 Jan '17 | 29 Jan '17 | 05 Feb '17 | 12 Feb '17 | 19 Feb '17 | 26 Feb '17 | 05 Mar '17 | 12 Mar '17 | 19 Mar '17



LONDON COST CONSULTANCY / CAPRI

32 JAMESTOWN ROAD - CONSTRUCTION PROGRAMME

25 Sep '16 | 02 Oct '16 | 09 Oct '16 | 16 Oct '16 | 23 Oct '16 | 30 Oct '16 | 06 Nov '16 | 13 Nov '16 | 20 Nov '16 | 27 Nov '16 | 04 Dec '16 | 11 Dec '16 | 18 Dec '16 | 25 Dec '16 | 01 Jan '17 | 08 Jan '17 | 15 Jan '17 | 22 Jan '17 | 29 Jan '17 | 05 Feb '17 | 12 Feb '17 | 19 Feb '17 | 26 Feb '17 | 05 Mar '17 | 12 Mar '17 | 19 Mar '17



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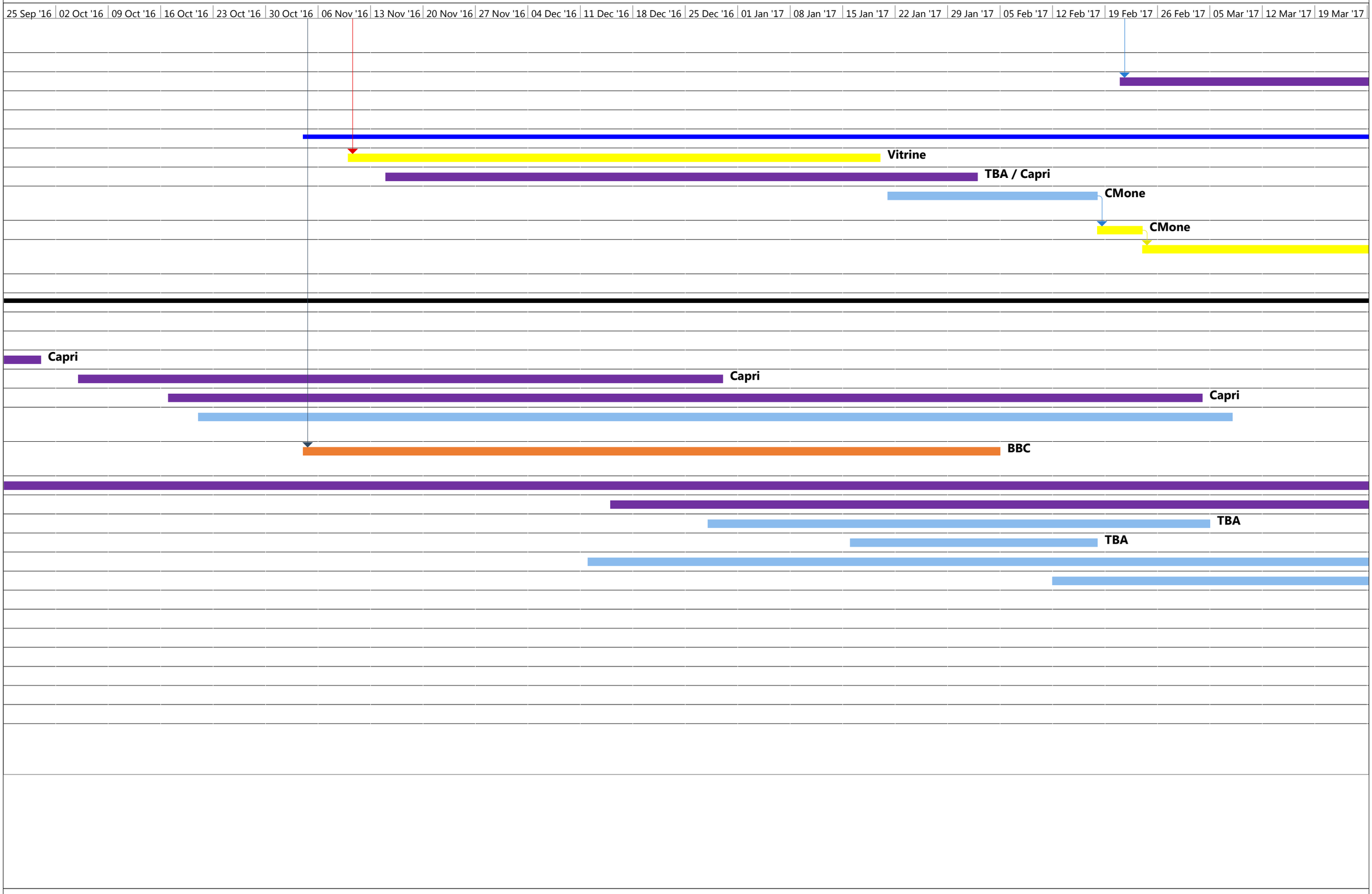
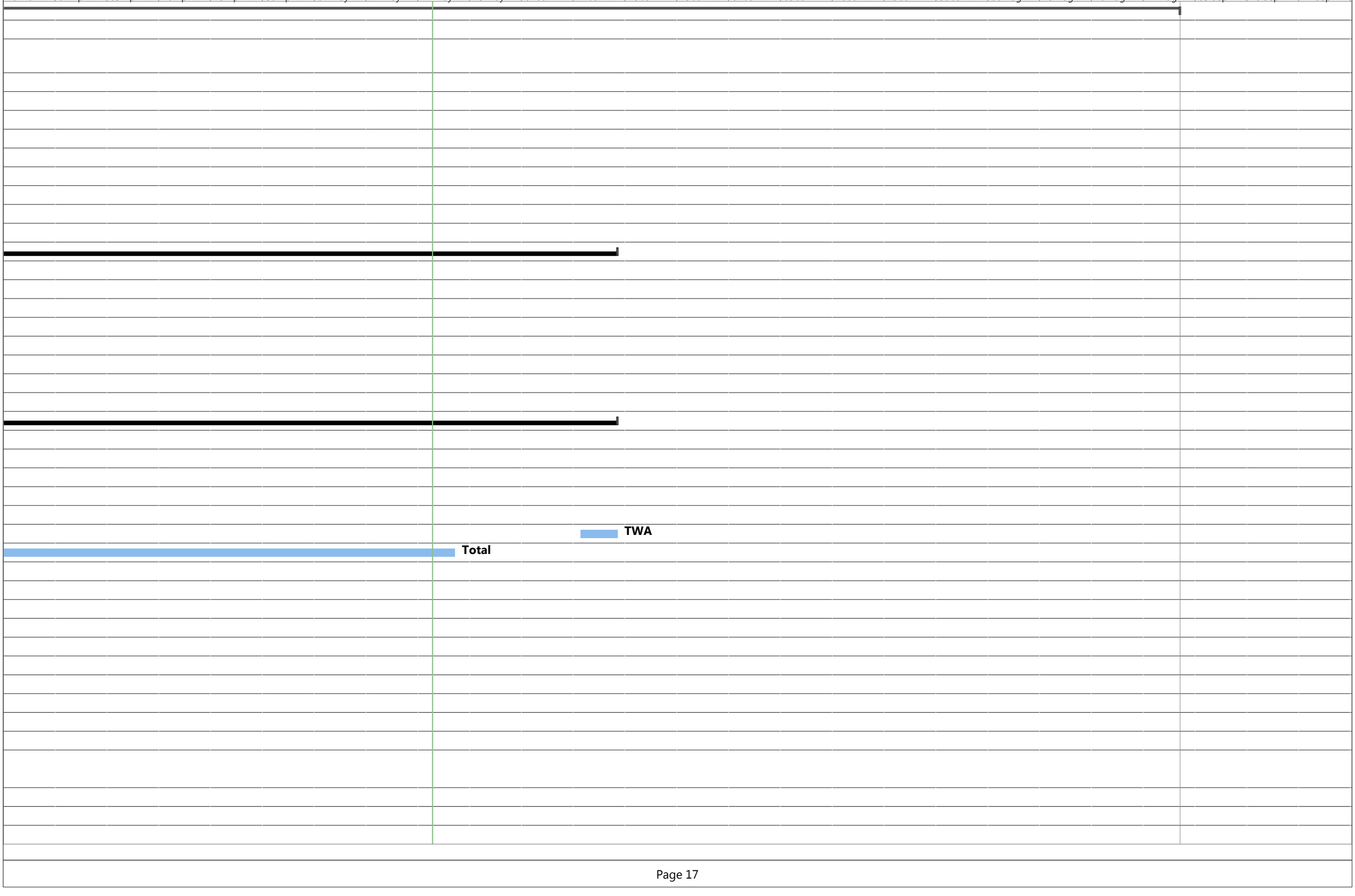


26 Mar '17 | 02 Apr '17 | 09 Apr '17 | 16 Apr '17 | 23 Apr '17 | 30 Apr '17 | 07 May '17 | 14 May '17 | 21 May '17 | 28 May '17 | 04 Jun '17 | 11 Jun '17 | 18 Jun '17 | 25 Jun '17 | 02 Jul '17 | 09 Jul '17 | 16 Jul '17 | 23 Jul '17 | 30 Jul '17 | 06 Aug '17 | 13 Aug '17 | 20 Aug '17 | 27 Aug '17 | 03 Sep '17 | 10 Sep '17 | 17 Sep '17



LONDON COST CONSULTANCY / CAPRI

32 JAMESTOWN ROAD - CONSTRUCTION PROGRAMME

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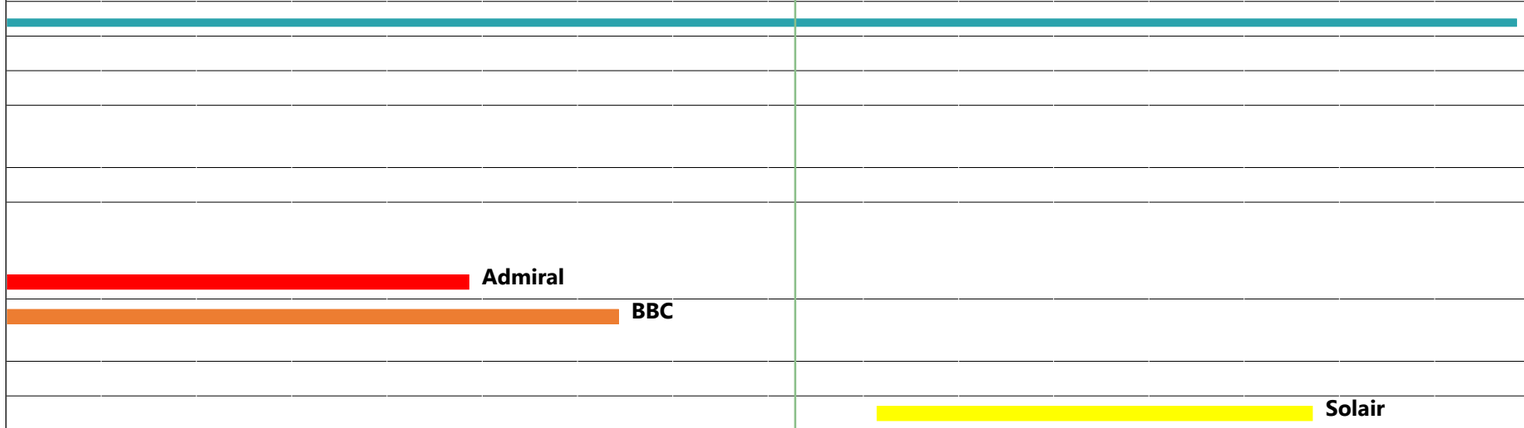

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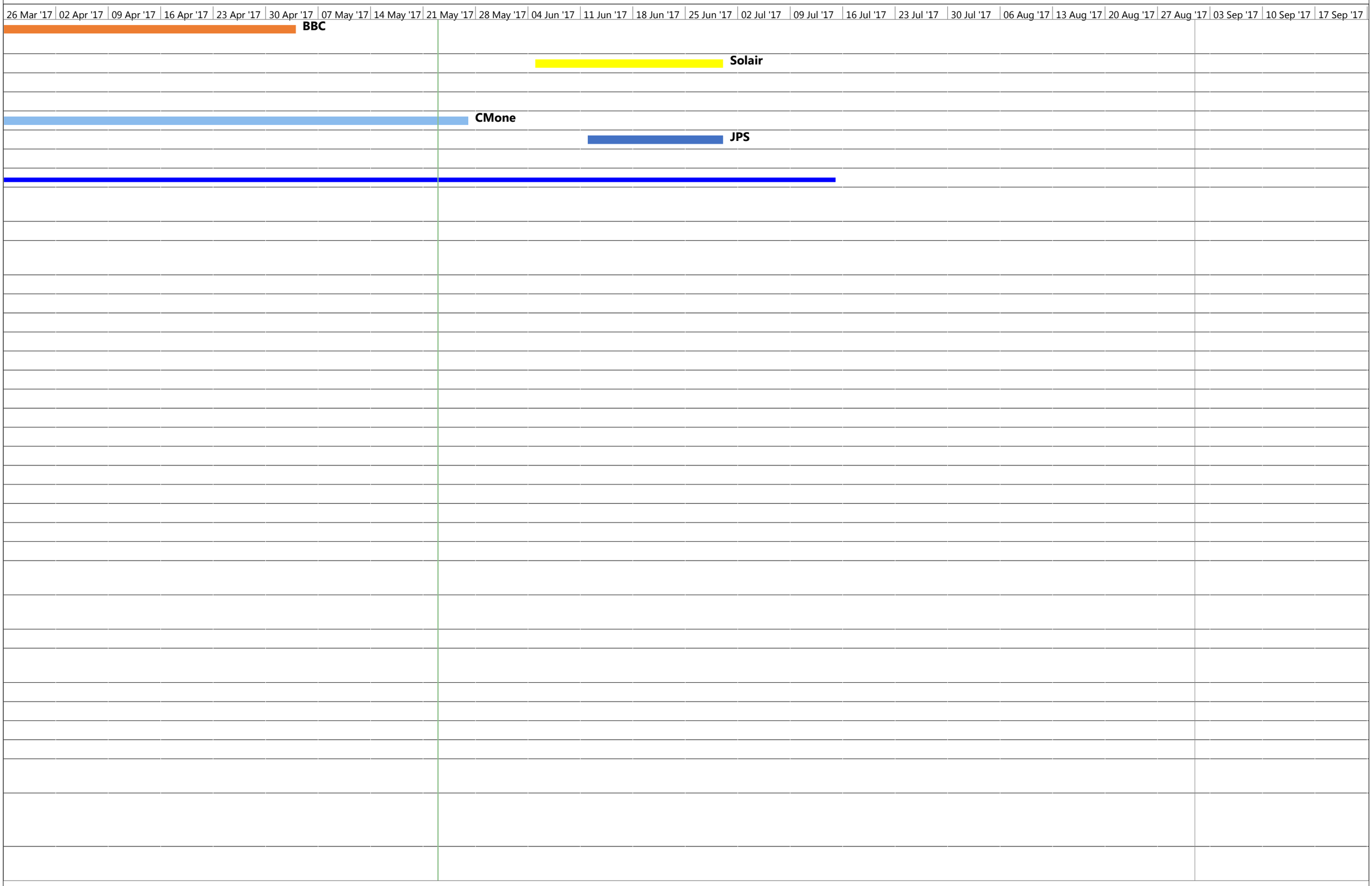

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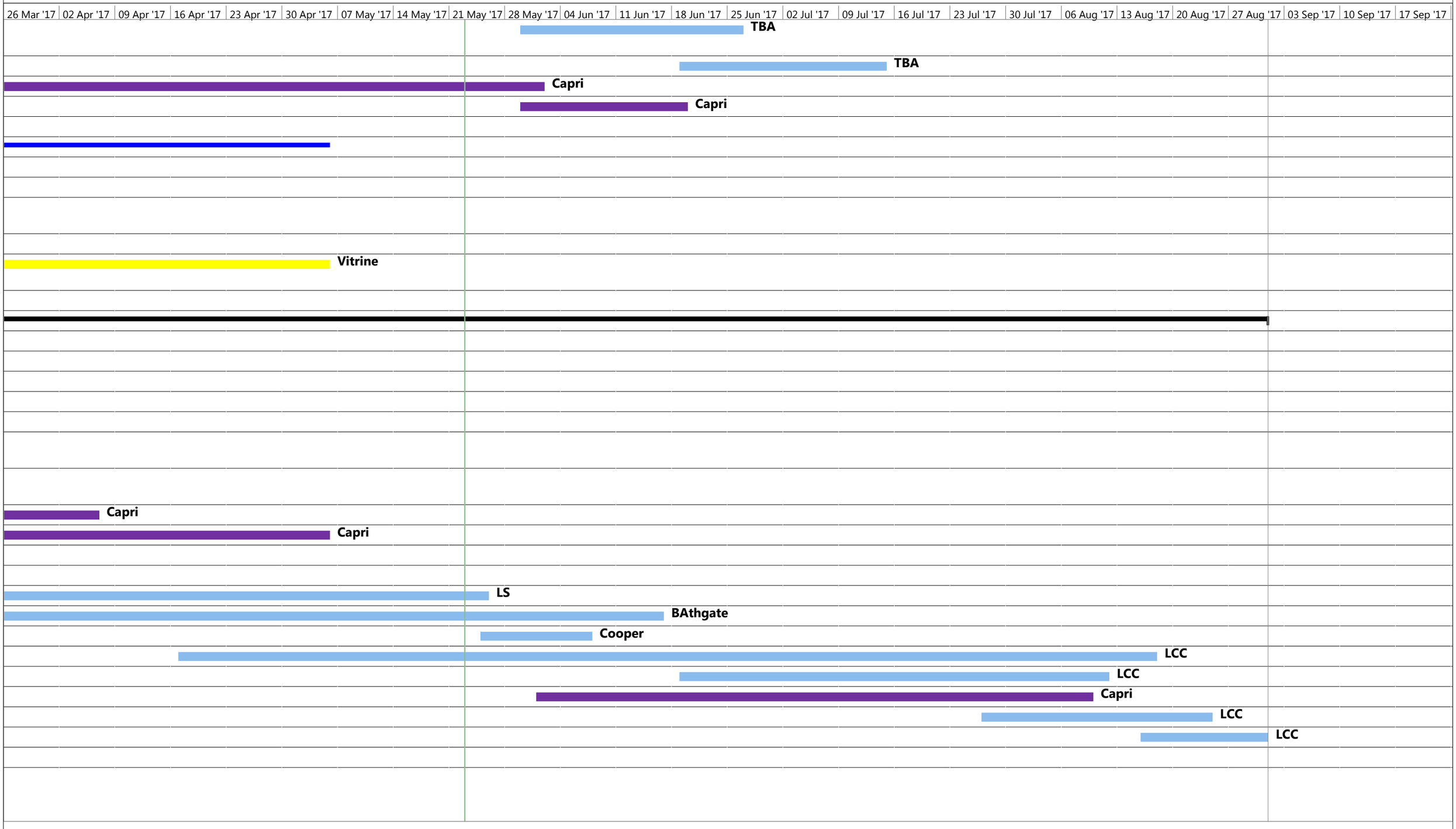


London & Regional (Bewlay House) Limited

Proposed Redevelopment

Bewlay House, 32 Jamestown Road, Camden

Noise Assessment

April 2015

Executive Park, Avalon Way, Anstey, Leicester, LE7 7GR
Tel: +44 (0)116 234 8000
Email: nigel.mann@wyg.com

Document Control

Project:	Proposed Redevelopment, Bewlay House, 32 Jamestown Road, Camden
Client:	London & Regional (Bewlay House) Limited
Job Number:	A081532
File Origin:	O:\Acoustics Air Quality and Noise\Active Projects\A081532

Document Checking:

Prepared by:	Graham Davis *Senior Consultant Environmental Scientist*	Initialled:	GD

Checked by:	Sam Moran *Senior Consultant*	Initialled:	SM

Verified by:	Nigel Mann *Director – Environmental Scientist*	Initialled:	NM

Issue	Date	Status
1	20/06/13	First Issue
2	05/12/13	Second Issue – Revised Site Plans
3	17/04/15	Third Issue – Revised Site Plans
4	23/04/15	Fourth Issue – Minor Amendments

Contents Page

Appendix Contents

1.0 Introduction

1.1 Purpose of this Report

This report presents the findings of a noise assessment for the proposed refurbishments of existing office units at Bewlay House, 32 Jamestown Road, Camden. This report has been updated to reflect changes to the scheme proposals that have taken place since the issue of the previous noise assessment undertaken by WYG in 2013; the assessment has also been undertaken in accordance with updated guidance documents. This version of the report assesses updated details with regard to roof mounted air handling units.

A description of the existing noise environment in and around the site is provided. Noise surveys have been undertaken and the results used to verify predictions of the short-term and long-term effects of noise. The noise levels from the proposed development have been predicted at local representative receptors using CADNA noise modelling software which incorporates ISO 9613 and CRTN methodologies and calculations.

In addition to the above, reference has also been given to Planning Condition 7 (planning permission ref: 2013/8265/P) which states:

"(7) Noise levels at a point 1 metre external to sensitive facades shall be at least 5dB(A) less than the existing background measurement (LA90), expressed in dB(A) when all plant/equipment (or any part of it) is in operation unless the plant/equipment hereby permitted will have a noise that has a distinguishable, discrete continuous note (whine, hiss, screech, hum) and/or if there are distinct impulses (bangs, clicks, clatters, thumps), then the noise levels from that piece of plant/equipment at any sensitive façade shall be at least 10dB(A) below the LA90, expressed in dB(A)."

A list of acoustic terminology and abbreviations used in this report is provided in Appendix A and a set of location plans and noise contour plots relevant to the assessment are presented in Appendix B.

1.2 Legislative Context (England)

PPG24 was replaced by the National Planning Policy Framework (NPPF) on 27 March 2012. With regard to noise and planning, the NPPF contains the following 4 short statements (section 123):

A. Avoid noise from giving rise to significant adverse impacts on health and quality of life as a result of new development;

B. Mitigate and reduce to a minimum other adverse impacts on health and quality of life arising from noise from new development, including through the use of conditions;

C. Recognise that development will often create some noise and existing businesses wanting to develop in continuance of their business should not have unreasonable restrictions put on them because of changes in nearby land uses since they were established; and

D. Identify and protect areas of tranquillity which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason.

The national Planning Practice Guidance (PPG) web-based resource was launched by the Department for Communities and Local Government (DCLG) on 6 March 2014 to support the National Planning Policy Framework and make it more accessible. The overall aim of the guidance, tying in with the principles of the NPPF and the Explanatory Note of the Noise Policy Statement for England (NSPE), is to *identify whether the overall effect of noise exposure is, or would be, above or below the significant observed adverse effect level and the lowest observed adverse effect level for the given situation.*

A summary of the effects of noise exposure associated with both noise generating developments and noise sensitive developments is presented within the PPG: Noise and repeated as follows:

Table 1.1 Noise Exposure Hierarchy

Perception	Examples of Outcomes	Increasing Effect Level	Action
Not noticeable	No Effect	No Observed Effect	No Specific Measures Required
Noticeable and not intrusive	Noise can be heard, but does not cause any change in behaviour or attitude. Can slightly affect the acoustic character of the area but not such that there is a perceived change in the quality of life.	No Observed Adverse Effect (NOAEL)	No Specific Measures Required
Lowest Observed Adverse Effect Level (LOAEL)			
Noticeable and intrusive	Noise can be heard and causes small changes in behaviour and/or attitude, e.g. turning up volume of television; speaking more loudly; closing windows for some of the time because of the noise. Potential for non-awakening sleep disturbance. Affects the acoustic character of the area such that there is a perceived change in the quality of life.	Observed Adverse Effect	Mitigate and reduce to a minimum
Significant Observed Adverse Effect Level (SOAEL)			
Noticeable and disruptive	The noise causes a material change in behaviour and/or attitude, e.g. having to keep windows closed most of the time, avoiding certain activities during periods of intrusion. Potential for sleep disturbance resulting in difficulty in getting to sleep, premature awakening and difficulty in getting back to sleep. Quality of life diminished due to change in acoustic character of the area.	Significant Observed Adverse Effect	Avoid
Noticeable and very disruptive	Extensive and regular changes in behaviour and/or an inability to mitigate effect of noise leading to psychological stress or physiological effects, e.g. regular sleep deprivation/awakening; loss of appetite, significant, medically definable harm, e.g. auditory and non-auditory	Unacceptable Observed Adverse Effect	Prevent

2.0 Assessment Criteria

2.1 Internal Noise Assessment Criteria

In order to enable the assessment of the proposed development in terms of LOAEL and SOAEL, Table 2.1 presents equivalent noise levels and associated actions with the target noise level criteria identified. Within the context of the Proposed Development, national planning policy and appropriate guidance documents including 'BS 8233 – Guidance on Sound Insulation and Noise Reduction for Buildings' (2014). For the purpose of this assessment, the target noise level criteria are noted in italics in the table below.

Table 2.1 Noise Level Criteria and Actions

Effect Level	Noise Level Criteria	Action / Justification
No Observed Adverse Effect Level	Noise levels below: Open Plan Office – 45 $dBL_{Aeq,T}$	Action: None Justification: Within BS8233 criterion
Lowest Observed Adverse Effect Level	Noise levels exceed: Open Plan Office – 45 $dBL_{Aeq,T}$	Mitigate to achieve: *Open Plan Office – 45 $dBL_{Aeq,T}$*
Significant Observed Adverse Effect	Noise levels exceed: Open Plan Office – 50 $dBL_{Aeq,T}$	Avoid Mitigate to achieve: Open Plan Office – 45-50 $dBL_{Aeq,T}$
Unacceptable Observed Adverse Effect	Noise levels with mitigation exceed: Open Plan Office – 50 $dBL_{Aeq,T}$	Prevent

2.2 Building Services Plant Noise Assessment

Noise from building services plant has been assessed in accordance with Planning Condition 7 (planning permission reference 2013/8265/P) which states:

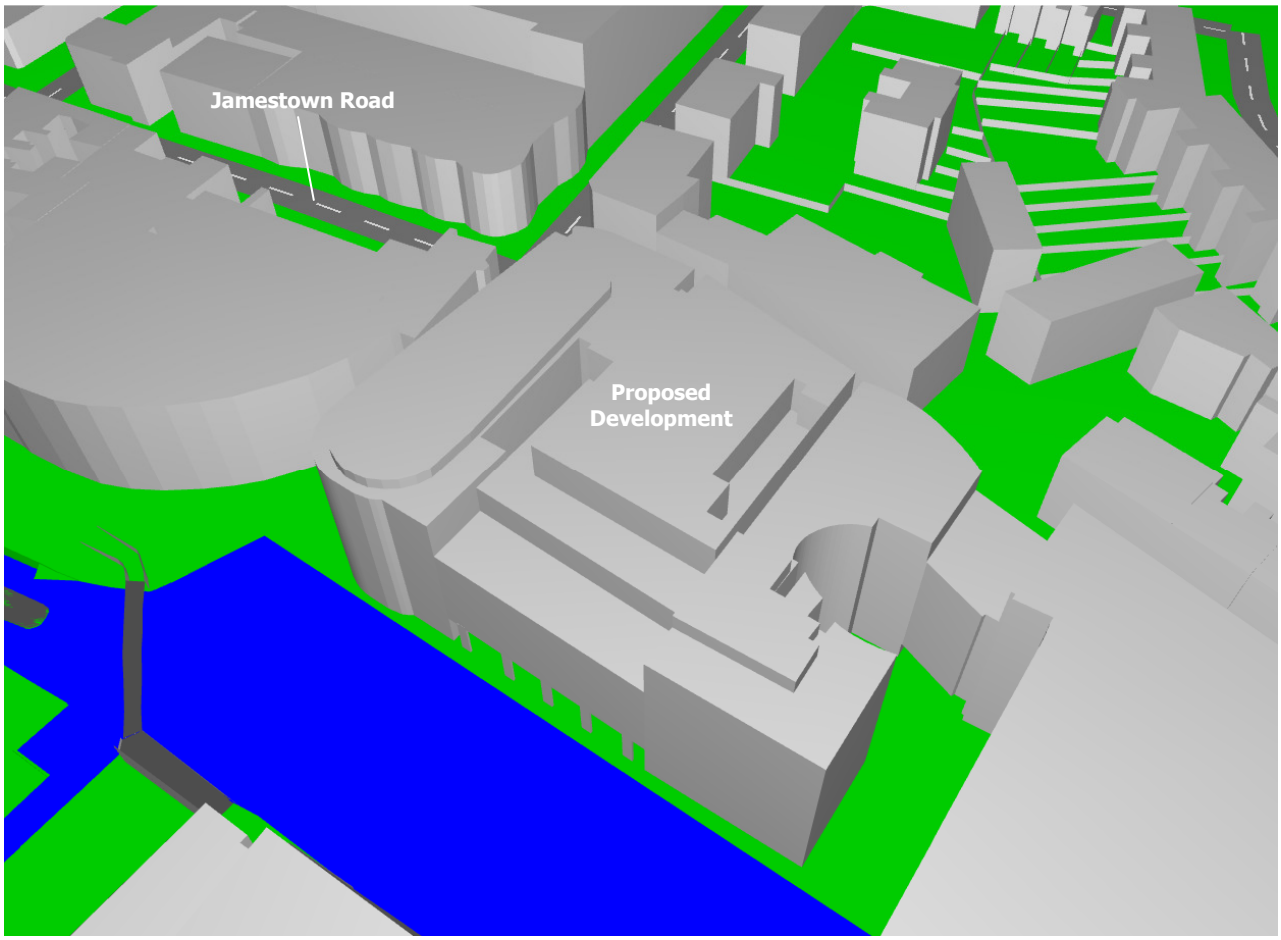
"(7) Noise levels at a point 1 metre external to sensitive facades shall be at least 5dB(A) less than the existing background measurement (LA90), expressed in dB(A) when all plant/equipment (or any part of it) is in operation unless the plant/equipment hereby permitted will have a noise that has a distinguishable, discrete continuous note (whine, hiss, screech, hum) and/or if there are distinct impulses (bangs, clicks, clatters, thumps), then the noise levels from that piece of plant/equipment at any sensitive façade shall be at least 10dB(A) below the LA90, expressed in dB(A)."

3.0 Assessment Methodology

3.1 Noise Modelling Methodology

Three dimensional noise modelling has been undertaken based on the monitoring data to predict L_{Aeq} and L_{Amax} noise levels at a large number of locations both horizontally and vertically. CADNA noise modelling software has been used (as shown in Figure 3.1). This model is based on the Department of Transport Calculation of Road Traffic Noise (CRTN) and ISO 9613 noise propagation methodology and allows for detailed prediction of noise levels to be undertaken.

Figure 3.1 CADNA Noise Model



The modelling software calculates noise levels based on the emission parameters and spatial settings that are entered. Input data, assumptions and model settings as given in the table below have been used.

Table 3.1 Modelling Parameters Sources and Assumptions

Parameter	Source	Details
Horizontal distances – around site	Ordnance Survey	Ordnance Survey
Ground levels – around site	Ordnance Survey	Ordnance Survey
Ground levels – other areas	Site Observations and Ordnance Survey	OS 1:25,000 contours and OS 1:10,000 spot heights.
Traffic data, main surrounding roads	WYGE	Traffic flows for local roads based on WYGE observations and experience.
Traffic data – local roads	WYGE	Traffic flows for local roads based on WYGE observations and experience.
Building heights – around site	WYGE Observations	8 m height for two storey residential properties, and 4 m for Bungalows
Barrier heights	WYGE Observations	All existing barriers at 1.0 m with the exception of hedges and trees which are assumed to offer no noise protection.
Receptor positions	WYGE	1 m from façade, height of 1.5 m for ground floor, 4.5 m for first floor properties with a 3m increase per storey. 1.5 m height for model grid and monitoring locations for validation.
Reflections	WYGE	First order reflections have been applied based on mirror image sources
Absorbent Ground	CADNA	Frequency dependant ground absorption has been applied based on values specified in VDI 2714/16 clause 6.3.
Façade Correction	CADNA	Façade corrections have been incorporated into the modelling
Gradient	CADNA	Gradient for each road has been calculated from the height information using the 'calc slope of roads' tool
Proposed Plans	Ben Adams Architects	Proposed Plans: A12-007-199 - 206 Proposed Elevations:A12-007-400/401

It is acknowledged that a number of these assumptions will affect the overall noise levels presented in this report. However, it should be noted that certain assumptions made, as identified above, are worst case.

3.2 Model Input Data

3.2.1 Traffic Noise Data

All roads expected to make a significant contribution have been included within this assessment. Noise emissions from existing traffic flows have been derived from verification of the measured noise levels along with observations made during the site survey and/or WYG Environment (WYGE) experience of similar road systems. Estimates of the vehicle speeds have been made based upon the speed restrictions currently in force in the area.

3.2.2 Building Services Plant Noise Data

Noise level data associated with the proposed building services plan are presented in the table below. The air handling units and noise breaking out from plant enclosure have been modelled as horizontal and vertical area sources within the fifth floor plant area. The boiler flue terminations have been modelled as point sources.

Table 3.2 New Building Services Plant Sound Power Levels

Description	Octave Band Centre Frequency (Hz)							
	63	125	250	500	1000	2000	4000	8000
1 x S9-XBV-LL2WP (Air Handling Unit)	78	68	69	51	40	36	37	22
1 x XBC75-V-LES (Air Handling Unit)	67	59	56	54	45	37	38	30
1 x VTL-E 116-L (Cooling Tower)	93	89	79	72	71	66	62	67
3 x Boiler Flue Termination	71.8	71.8	66.2	64.1	65.2	59.8	51.3	41.4

Additional plant is understood to include condensers located on the roof of the proposed offices, and backup boilers and water pumps located within the ground floor plant room. The maximum sound pressure levels of the point and vertical area sources at 1 metres were estimated in the model as a conditional maximum level that the noise levels at nearby existing receptors were predicted to meet the assessment criteria.

3.3 Existing and Proposed Sensitive Receptors (for Plant Noise Assessment)

The closest existing sensitive receptors are residential premises located at 34 - 36 Jamestown Road and the hotel located at 30 Jamestown Road. The table below summarises receptor locations that have been selected to represent worst-case residential receptors with respect to direct noise from the proposed plant. The locations of the receptors are shown on SK02 in Appendix B:

Table 3.3 Existing Receptor Locations

Ref.	Description	Co-ordinates		
		Closest Source	Distance to Source	Height (m)
R1	Top Floor of 34-36 Jamestown Road, Southern Façade	Boiler Flues	10	21
R2	Top Floor of 30 Jamestown Road, South-Western Façade	AHU Casing	30	24
R3	Top Floor of 30 Jamestown Road, Western Façade	AHU Casing	27	24
R4	Top Floor of 30 Jamestown Road, North-Western Façade	AHU Casing	30	24
R5	Top Floor of 34-36 Jamestown Road, Northern Façade	AHU Inlet	13	24

3.4 Model Verification (Road Traffic and Existing Sources)

The model was verified by modelling the monitoring locations for the 'existing' scenario. Worst case daytime and night time L_{Aeq} and night time L_{Amax} scenarios have been verified. The comparison between the monitoring and modelling results are shown in the tables below.

Table 3.4 Modelled vs. Monitored Results $L_{Aeq;\ daytime\ 07:00 – 23:00}$

Location	Monitored L_{Aeq}	Modelled L_{Aeq}	Difference between Monitored and Modelled Results
LT1	65.9	66.1	0.2
LT2	59.7	59.7	0.0
ST1	71.2	71.1	-0.1
ST2	74.3	74.3	0.0
ST3	63.5	63.5	0.0
ST4	61.9	62.2	0.3
ST5	65.2	65.5	0.3

All values are sound pressure levels in dB re: $2x\ 10^{-5}$ Pa

Table 3.5 Modelled vs. Monitored Results $L_{Aeq;\ night\text{-}time\ 23:00– 07:00}$

Location	Monitored L_{Aeq}	Modelled L_{Aeq}	Difference between Monitored and Modelled Results
LT1	62.0	62.4	0.4
LT2	58.5	58.5	0.0
ST1	67.6	67.6	0.0
ST2	75.5	75.5	0.0
ST3	62.6	62.6	0.0
ST4	64.5	64.5	0.0
ST5	66.7	66.7	0.0

All values are sound pressure levels in dB re: $2x\ 10^{-5}$ Pa

Table 3.6 Modelled vs. Monitored Results $L_{Amax;\ night\text{-}time\ 23:00–07:00}$

Location	Monitored L_{Amax}	Modelled L_{Amax}	Difference between Monitored and Modelled Results
LT1	83.6	84.2	0.6
LT2	74.6	75.0	0.4
ST1	82.8	89.6	6.8
ST2	92.2	92.2	0.0
ST3	81.4	81.4	0.0
ST4	80.9	80.9	0.0
ST5	88.9	87.3	-1.6

All values are sound pressure levels in dB re: $2x\ 10^{-5}$ Pa

The verification points show a divergence between monitored and modelled results of no more than 3 dB with the exception of ST1 night-time (15 minute measurement) which experienced a lower measured noise level (L_{Amax}) than the noise model has calculated, all models are assumed to be suitably verified.

3.5 Tranquillity Rating

An assessment of the existing tranquillity level of the site has been based on the mapping data published by Campaign to Protect Rural England (CPRE). This uses a colour coded system and a 500m assessment grid for the whole of England and a tranquillity rating of between 1 and 10 is assigned (1 being least tranquil and 10 being most). By reference to these maps the development is assessed as falling into Zone 1.

4.0 Noise Survey

A monitoring survey was undertaken to characterise baseline ambient noise levels currently experienced on the site and to establish the relative local background and traffic noise levels.

4.1 Noise Survey Methodology

Equipment used during the survey included:

B&K 2260	Environmental Noise Analyser (WYG1)	s/n	2361273
B&K 4231	Calibrator	s/n	2176211
Rion NL-52	Environmental Noise Analyser (WYG14)	s/n	610212
Rion NL-52	Environmental Noise Analyser (WYG15)	s/n	1221575

The measurement equipment was checked against the appropriate calibrator at the beginning and end of the measurements, in accordance with recommended practice and no drift was observed. The accuracy of the calibrators can be traced to National Physical Laboratory Standards, calibration certificates for which are available on request.

A baseline monitoring survey was undertaken at five locations (as specified in the following table and shown in SK01 of Appendix B from Friday 14th June 2013 to Tuesday 18th June 2013. Attended short term measurements were undertaken at five locations during the day, evening, peak and night-time periods with three additional locations being measured unattended over a 95 hour period. The raw data collected from the long term monitoring is available upon request.

Measurements were taken in general accordance with BS 4142:1997 and BS 7445-1:2003. Weather conditions during the survey period were observed as being dry. Anemometer readings confirmed that wind speeds were less than 5 ms^{-1} at all times during the survey with a predominant westerly wind direction.

Table 4.1 Noise Monitoring Locations

Ref	Description	Grid Reference	
		X	Y
LT1	Third floor balcony of 32 Jamestown Road, southern façade	528654.07	183992.58
LT2	Roof of 32 Jamestown Road, northern façade	528633.63	184036.08
ST1	Adjacent to entrance of 32 Jamestown Road	528754.17	184091.89
ST2	Adjacent to 279 Camden High Street	528554.92	183908.75
ST3	Adjacent to 31 Oval Road and entrance of Centric Close	528630.10	184068.65
ST4	Tow path opposite 32 Bewlay House, adjacent to Brunel Building	528664.40	184088.18
ST5	Adjacent to 44 Middle Yar, Camden Lock	528654.07	183992.58

4.2 Noise Survey Results

Existing ambient noise levels around the site are dominated by traffic noise from Jamestown Road and noise from the nearby Camden Lock market during the daytime. During the evening and night-time periods noise from music and patrons of nearby pubs and clubs was observed to the north and east of the site, and along Jamestown Road. Noise levels along Camden High Street were dominated by road traffic noise and various sources of music during the daytime, with noise dominated by pedestrians and road traffic during the evening and night-time periods. Distant noise from railway lines to the west and north of the site was also identified during the attended survey.

Ambient and background noise levels are usually described using the L_{Aeq} index (a form of energy average) and the L_{A90} index (i.e. the level exceeded for 90% of the measurement period) respectively. Road traffic noise is generally described using the L_{A10} index (i.e. the level exceeded for 10% of the measurement period).

The results of the statistical measurements and frequency measurements conducted during the survey are summarised in the following table. All values are sound pressure levels in dB (re: 2 x 10^{-5} Pa).

Table 4.2 Results of Baseline Noise Monitoring Survey (Average Levels)

Period	Duration (T)	Monitoring Date and Times	Location	$L_{Aeq,T}$ (dB)	$L_{Amax,T}$ (dB)	$L_{Amin,T}$ (dB)	$L_{A10,T}$ (dB)	$L_{A90,T}$ (dB)
Weekday Daytime 07:00 - 23:00	31 Hours	14/06/2013 - 18/06/2013 07:00 - 23:00	LT1	65.9	88.6	46.9	69.0	55.9
Weekday Night-time 23:00 – 07:00	16 Hours	14/06/2013 - 18/06/2013 23:00 - 07:00		60.9	83.6	43.8	60.9	49.3
Weekend Daytime 07:00 - 23:00	32 Hours	15/06/2013 - 16/06/2013 07:00 - 23:00		64.8	84.8	45.9	67.9	53.8
Weekend Night-time 23:00 – 07:00	16 Hours	15/06/2013 - 16/06/2013 23:00 - 07:00		62.0	82.6	43.7	62.6	50.3
Weekday Daytime 07:00 - 23:00	30 Hours	14/06/2013 - 18/06/2013 07:00 - 23:00	LT2	58.8	79.8	50.5	59.7	56.0
Weekday Night-time 23:00 – 07:00	16 Hours	14/06/2013 - 18/06/2013 23:00 - 07:00		55.5	74.6	48.2	56.1	52.9
Weekend Daytime 07:00 - 23:00	32 Hours	15/06/2013 - 16/06/2013 07:00 - 23:00		59.7	75.8	49.2	60.4	56.9
Weekend Night-time 23:00 – 07:00	16 Hours	15/06/2013 - 16/06/2013 23:00 - 07:00		58.5	73.3	48.1	58.3	54.7
Day 07:00 - 19:00	15 Mins	14/06/2013 16:01	ST1	71.2	91.4	52.0	74.5	57.5
	15 Mins	14/06/2013 16:19	ST2	74.3	95.6	62.1	76.6	66.6
	15 Mins	18/06/2013 13:50	ST3	63.5	78.3	43.5	67.6	49.1
	15 Mins	14/06/2013 16:50	ST4	61.9	81.4	54.0	64.3	56.7
	15 Mins	14/06/2013 17:11	ST5	65.2	79.5	60.1	67.0	62.5

Period	Duration (T)	Monitoring Date and Times	Location	$L_{Aeq,T}$ (dB)	$L_{Amax,T}$ (dB)	$L_{Amin,T}$ (dB)	$L_{A10,T}$ (dB)	$L_{A90,T}$ (dB)
Peak 17:00 – 18:00	10 Mins	14/06/2013 17:41	ST1	70.1	84.0	52.0	74.5	56.1
	10 Mins	14/06/2013 17:28	ST2	73.9	90.9	61.4	76.4	66.2
	10 Mins	14/06/2013 17:55	ST3	65.2	79.7	48.4	69.1	53.3
	10 Mins	14/06/2013 18:09	ST4	62.3	82.3	54.3	65.3	57.1
	10 Mins	14/06/2013 18:22	ST5	69.3	90.1	59.7	71.4	63.4
Evening 19:00 - 23:00	15 Mins	14/06/2013 21:51	ST1	63.2	78.8	52.5	67.1	55.7
	15 Mins	14/06/2013 22:09	ST2	72.7	88.4	60.1	76.1	64.7
	15 Mins	14/06/2013 21:33	ST3	63.5	78.5	45.1	67.7	48.3
	15 Mins	14/06/2013 22:46	ST4	64.3	78.4	58.0	66.2	61.6
	15 Mins	14/06/2013 22:26	ST5	65.0	76.1	60.0	66.8	62.7
Night 23:00 - 07:00	15 Mins	14/06/2013 23:56	ST1	63.9	82.8	50.2	67.1	52.9
	15 Mins	14/06/2013 23:38	ST2	75.5	92.2	60.7	78.4	66.5
	15 Mins	15/06/2013 00:20	ST3	62.6	81.4	44.8	65.9	46.7
	15 Mins	14/06/2013 23:02	ST4	64.5	80.9	58.6	66.2	62.0
	15 Mins	14/06/2013 23:19	ST5	66.7	88.9	59.5	68.6	62.8

All values are sound pressure levels in dB re: $2x\ 10^{-5}$ Pa

5.0 Assessment of Key Effects

5.1 Noise Intrusion Assessment

Internal noise levels, at all the office spaces of the proposed development, based on the existing ambient noise climate, have been assessed both with windows open, where a reduction from a partially open window of 15 dB has been used, and with windows closed where an assumption of a glazing with a sound reduction of 30 dB has been used unless stated otherwise. Receptor location plans for the floors are shown within SK05 – SK08 of Appendix B.

The glazing and ventilation strategy has been designed to achieve BS 8233 internal L_{Aeq} daytime noise level criterion of 45 dB for open plan offices.

Table 5.1 Noise Intrusion Levels L_{Aeq}

Location	Daytime External L_{Aeq}	Internal L_{Aeq} with windows open	Internal L_{Aeq} with windows closed	Recommended Glazing Specification (SRI) to Achieve 45 dB L_{Aeq} daytime	Alternative Ventilation Required?
Ground Floor 1	40.5	25.5	10.5	30.0	No
Ground Floor 2	40.5	25.5	10.5	30.0	No
Ground Floor 3	40.5	25.5	10.5	30.0	No
Ground Floor 4	40.6	25.6	10.6	30.0	No
Ground Floor 5	71.1	56.1	41.1	30.0	**Yes**
First Floor 1	52.2	37.2	22.2	30.0	No
First Floor 2	52.9	37.9	22.9	30.0	No
First Floor 3	53.5	38.5	23.5	30.0	No
First Floor 4	54.4	39.4	24.4	30.0	No
First Floor 5	70.0	55.0	40.0	30.0	**Yes**
First Floor 6	69.7	54.7	39.7	30.0	**Yes**
First Floor 7	51.4	36.4	21.4	30.0	**Yes**
Second Floor 1	52.4	37.4	22.4	30.0	No
Second Floor 2	53.4	38.4	23.4	30.0	No
Second Floor 3	53.9	38.9	23.9	30.0	No
Second Floor4	54.8	39.8	24.8	30.0	No
Second Floor 5	68.7	53.7	38.7	30.0	**Yes**
Second Floor 6	68.4	53.4	38.4	30.0	**Yes**
Second Floor 7	68.4	53.4	38.4	30.0	**Yes**
Third Floor 1	54.0	39.0	24.0	30.0	No
Third Floor 2	53.6	38.6	23.6	30.0	No
Third Floor 3	54.3	39.3	24.3	30.0	No
Third Floor 4	55.1	40.1	25.1	30.0	No
Third Floor 5	67.5	52.5	37.5	30.0	**Yes**
Third Floor 6	67.3	52.3	37.3	30.0	**Yes**
Third Floor 7	67.2	52.2	37.2	30.0	**Yes**
Fourth Floor 1	53.8	38.8	23.8	30.0	No
Fourth Floor 2	52.6	37.6	22.6	30.0	No
Fourth Floor 3	52.1	37.1	22.1	30.0	No
Fourth Floor 4	51.5	36.5	21.5	30.0	No
Fourth Floor 5	56.9	41.9	26.9	30.0	No
Fourth Floor 6	57.3	42.3	27.3	30.0	No
Fourth Floor 7	57.6	42.6	27.6	30.0	No

Location	Daytime External L_{Aeq}	Internal L_{Aeq} with windows open	Internal L_{Aeq} with windows closed	Recommended Glazing Specification (SRI) to Achieve 45 dB L_{Aeq} daytime	Alternative Ventilation Required?
Fourth Floor 8	57.4	42.4	27.4	30.0	No
Fifth Floor 1	53.8	38.8	23.8	30.0	No
Fifth Floor 2	53.0	38.0	23.0	30.0	No
Fifth Floor 3	52.9	37.9	22.9	30.0	No
Fifth Floor 4	54.7	39.7	24.7	30.0	No
Fifth Floor 5	62.7	47.7	32.7	30.0	**Yes**
Fifth Floor 6	62.9	47.9	32.9	30.0	**Yes**
Fifth Floor 7	62.5	47.5	32.5	30.0	**Yes**

Based on the assumption of standard double glazing (e.g. 4mm/16mm/4mm), internal noise levels within proposed office spaces are predicted to meet the required criteria with windows closed.

However, should windows be open along the facade overlooking Jamestown Road, the internal noise criteria will be exceeded. Therefore, sufficient levels of ventilation will need to be achieved through the means of openable windows on facades excluding the facade over looking Jamestown Road. Otherwise, an alternative means of ventilation will be required in order to meet both ventilation and internal ambient noise criteria. Alternative ventilation can be provided in several ways from acoustic trickle vents (which need to have the same acoustic performance as the glazing), other passive ventilation systems or mechanical ventilations systems.

5.2 Building Services Plant Noise Assessment

This assessment has been undertaken in order to establish the maximum external plant noise levels for the proposed development. The assessment compares the predicted average noise levels from proposed building service plant (BSP) noise, with the measured background noise L_{A90} at the surrounding residential receptors (worst case façade direction and floors were selected). As the proposed plant noise may contain a 'distinguishable hum' or other tonal or impulsive characteristic which may be perceptible at nearby sensitive receptor location, a 5 dB acoustic feature correction (as specified in Planning Condition 7 of planning permission reference 2013/8265/P) has been added to create the Plant 'Rating Level at Receptor'.

The noise level data associated with the air handling and boiler flue termination are presented in section 3.0. In order to take into account the cumulative impact of plant noise, maximum external noise breakout from ground and basement level plant and future roof mounted condensers have been established by defining different sound power levels at point and area source representative of the noise breakout through the ground level vents and from roof level condensers. When the sound pressure levels are set as shown in Table 5.2, the noise rating levels are 5 dB below the background levels at all existing sensitive receptor locations during daytime and night-time as shown in Table 5.3

Table 5.2 Proposed Emission Limits for BSP as Modelled

BSP Location	Sound Pressure Level at 1 metres from BSP	
	Daytime Emission Limit (dB(A)	Night-time Emission Limit (dB(A)
Ground Floor vent, South of Building	61.0	53.0
Roof Mounted Condenser Units	80.0	80.0

Table 5.3 Assessment for Proposed Building Services Plant

Ref	Existing Background L_{A90}		Noise rating level from plant (with +5 dB Correction)		BS 4142 Score	
	Daytime	Night-time	Daytime	Night-time	Daytime	Night-time
R1	55.9	49.3	42.9	43.8	-13.0	-5.5
R2	55.9	49.3	35.0	34.9	-20.9	-14.4
R3	56.0	52.9	36.9	36.9	-19.1	-16.0
R4	56.0	52.9	37.4	37.4	-18.6	-15.5
R5	56.0	52.9	43.8	43.8	-12.2	-9.1

All values are sound pressure levels in dBA re: 2×10^{-5} Pa.

Based on the above assessment, the proposed plant would be compliant with the requirements of Planning Condition 7.

6.0 Conclusions

NPPF 123 A & B

In considering the NPPF test in section 123, points A & B, the proposed development is not expected to have an 'adverse impact' on health or quality of life. Similarly, with regard to NPPF (123) point B, it is considered that all 'adverse impacts on health and quality of life' (relating to noise) are mitigated by the use of the following mitigation.

Glazing and Ventilation Strategy

A glazing and ventilation strategy has been provided which achieves both ventilation and internal ambient noise level requirements of L_{Aeq} daytime noise level criteria of 45 dB for open plan offices of the proposed development. The suggested strategy will be achievable.

Plant Noise Assessment

A building service plant noise assessment has been undertaken in accordance with Condition 7 of Planning Permission reference 2013/8265/P. Noise emission limits have been recommended with the aim of achieving a plant noise rating level at neighbouring residential properties of at least 5 dB below the existing background noise levels which are considered to be achievable.

NPPF 123 C & D

Given that nearby the site is surrounded by sensitive residential and commercial properties to the east and west, it is not considered that existing businesses wanting to develop would be particularly restricted by the introduction of the new sensitive use of the proposed development.

The development is situated in a CPRE Zone 1 area of tranquillity (Zone 10 being the most tranquil and Zone 1 being the least tranquil), as such NPPF 123 point D is not considered to apply to this site.

Appendices

Appendix A – Acoustic Terminology and Abbreviations

Acoustic Terminology

dB — Sound levels from any source can be measured in frequency bands in order to provide detailed information about the spectral content of the noise, i.e. whether it is high-pitched, low-pitched, or with no distinct tonal character. These measurements are usually undertaken in octave or third octave frequency bands. If these values are summed logarithmically, a single dB figure is obtained. This is usually not very helpful as it simply describes the total amount of acoustic energy measured and does not take any account of the ear's ability to hear certain frequencies more readily than others.

dB(A) — Instead, the dBA figure is used, as this is found to relate better to the loudness of the sound heard. The dBA figure is obtained by subtracting an appropriate correction, which represents the variation in the ear's ability to hear different frequencies, from the individual octave or third octave band values, before summing them logarithmically. As a result the single dBA value provides a good representation of how loud a sound is.

L_{Aeq} — Since almost all sounds vary or fluctuate with time it is helpful, instead of having an instantaneous value to describe the noise event, to have an average of the total acoustic energy experienced over its duration. The $L_{Aeq,\ 07:00 - 23:00}$ for example, describes the equivalent continuous noise level over the 12 hour period between 7 am and 11 pm. During this time period the L_{pA} at any particular time is likely to have been either greater or lower that the $L_{Aeq,\ 07:00 - 23:00}$.

L_{Amin} — The L_{Amin} is the quietest instantaneous noise level. This is usually the quietest 125 milliseconds measured during any given period of time.

L_{Amax} — The L_{Amax} is the loudest instantaneous noise level. This is usually the loudest 125 milliseconds measured during any given period of time.

L_n — Another method of describing, with a single value, a noise level which varies over a given time period is, instead of considering the average amount of acoustic energy, to consider the length of time for which a particular noise level is exceeded. If a level of x dBA is exceeded for say. 6 minutes within one hour, then that level can be described as being exceeded for 10% of the total measurement period. This is denoted as the $L_{A10,\ 1\ hr}$ = x dB.

The L_{A10} index is often used in the description of road traffic noise, whilst the L_{A90}, the noise level exceeded for 90% of the measurement period, is the usual descriptor for underlying background noise. L_{A1} and L_{Amax} are common descriptors of construction noise.

R_w — The *weighted sound reduction index* determined using the above *measurement* procedure, but weighted in accordance with the procedures set down in BS EN ISO 717-1. Partitioning and building board manufacturers commonly use this index to describe the inherent sound insulation performance of their products.

Abbreviations

CADNA – Computer Aided Noise Abatement

DMRB – Design Manual for Roads and Bridges

HGV – Heavy Goods Vehicle

PPG24 – Planning Policy Guidance

UDP – Unitary Development Plan

UKAS – United Kingdom Accreditation Service

WYGE – WYG Environment

Appendix B – Sketches

SK01 Noise Monitoring Locations

SK02 Building Services Plant Assessment Receptor Locations

SK03 Daytime $L_{Aeq,16hr}$

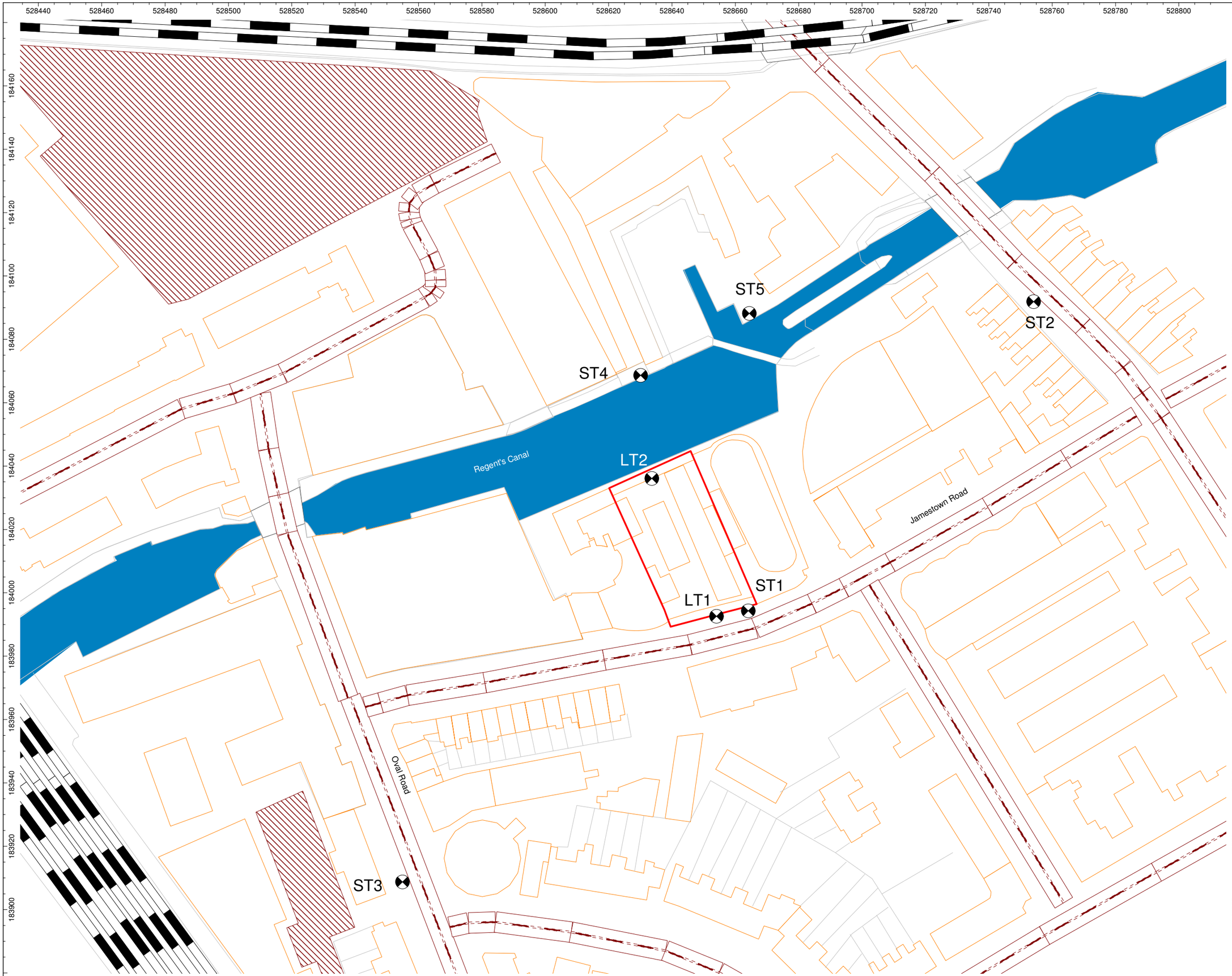
SK04 Night-time $L_{Aeq,8hr}$

SK05 Ground Floor Noise Intrusion Receptor Locations

SK06 1st Floor – 3rd Floor Noise Intrusion Receptor Locations

SK07 4th Floor Noise Intrusion Receptor Locations

SK08 5th Floor Noise Intrusion Receptor Locations



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London & Regional (Bewlay House) Ltd.

Project:
32 Jamestown Road

Project Number:
A081532

Drawing Title / Scenario:
Noise Monitoring Locations

Drawing Number:
SK01

Scale : Not to scale

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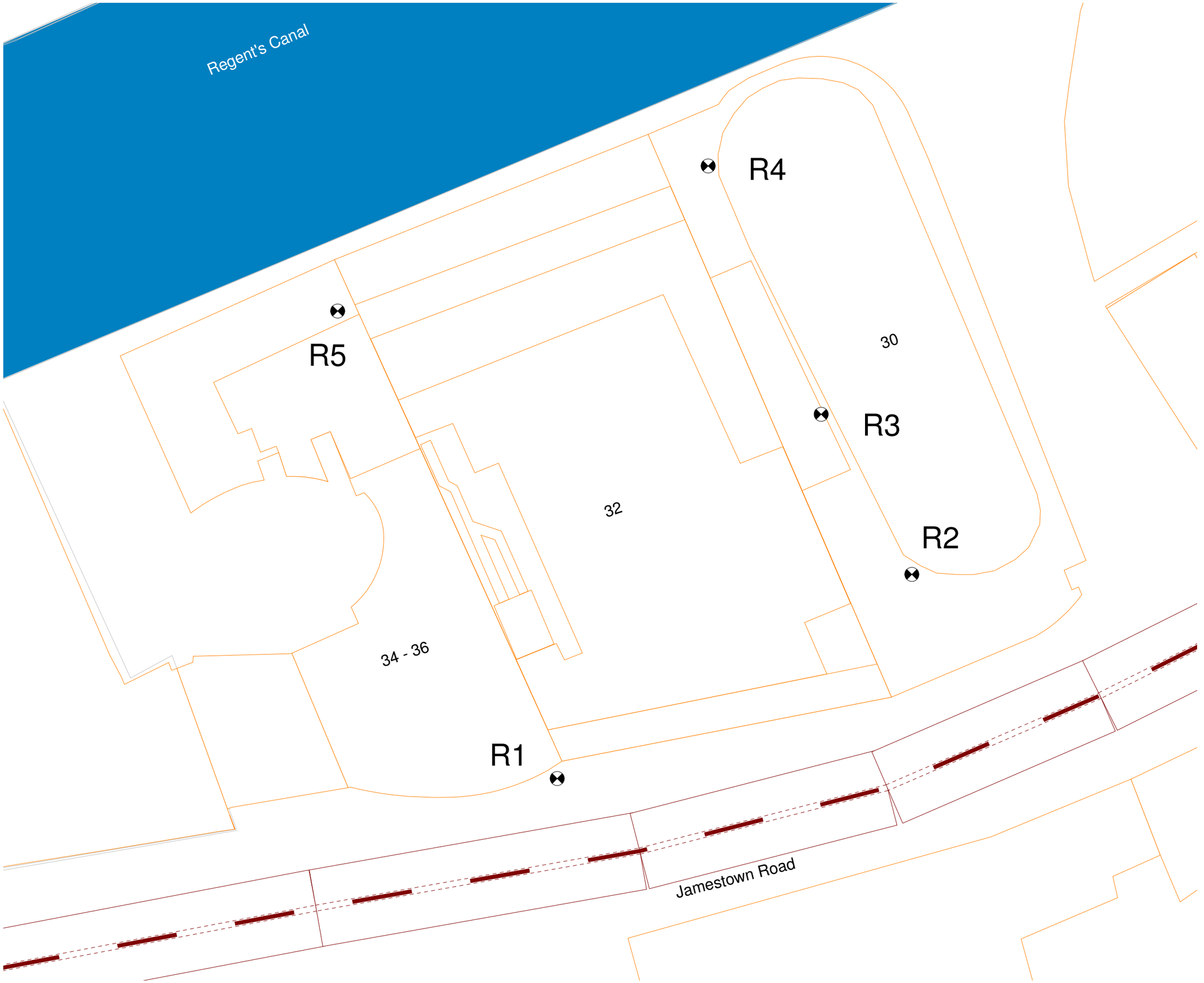
Avalon Way
Anstey
Leicestershire
LE7 7GR
Tel 0116 234 8000



Client:
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Project:
32 Jamestown Road

Project Number:
A081532

Drawing Title / Scenario:
BSP Assessment Sensitive Receptor Locations

Drawing Number:
SK02

Scale : Not to scale

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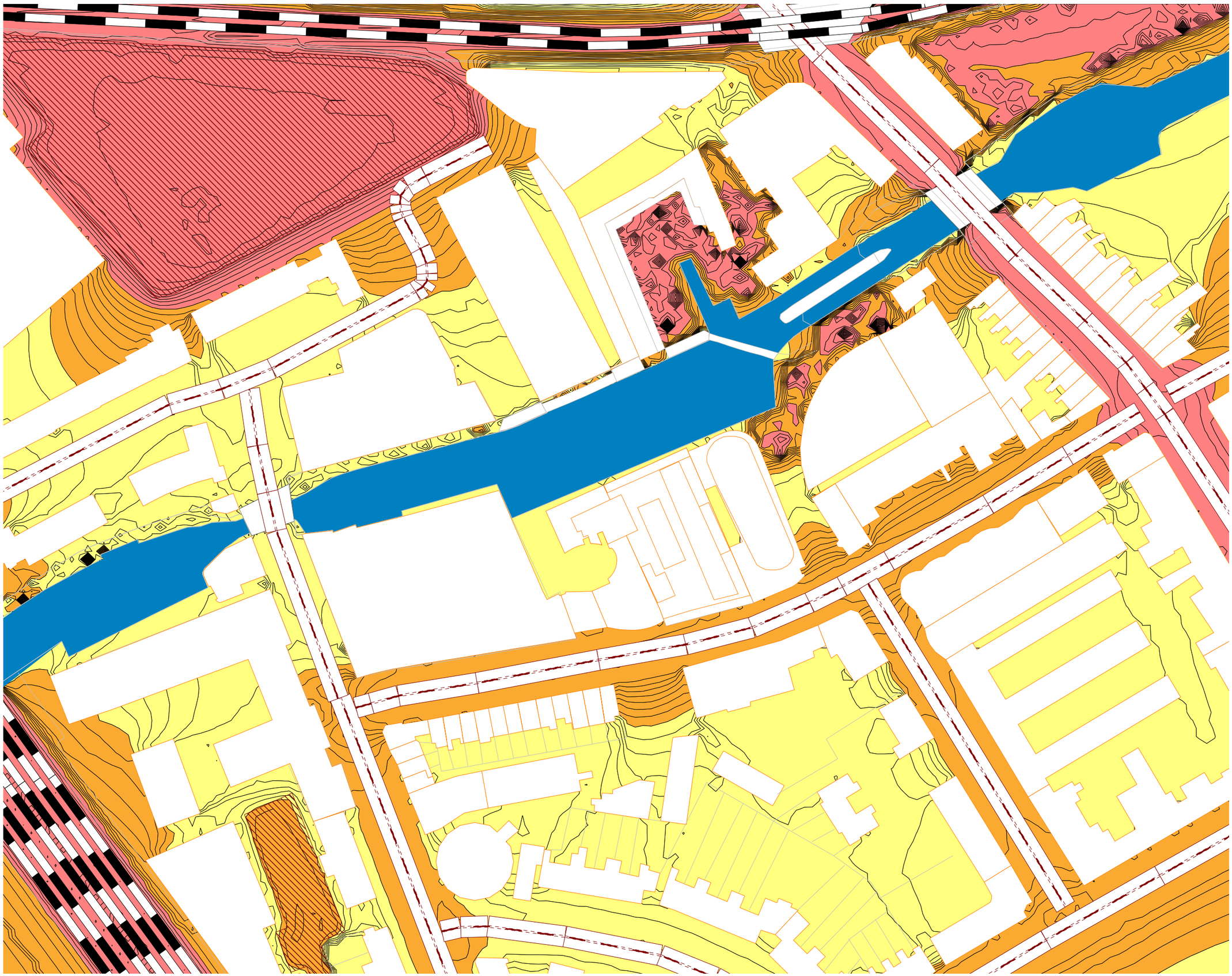

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Project:
32 Jamestown Road

Project Number:
A081532

Drawing Title / Scenario:
Daytime LAeq 16hr

Drawing Number:
SK03

Key:

- 0.0 - 55.0 dB
- 55.0 - 63.0 dB
- 63.0 - 72.0 dB
- 72.0 - 90.0 dB

Scale : Not to scale

Please note: Noise contour plots are for illustrative purposes only

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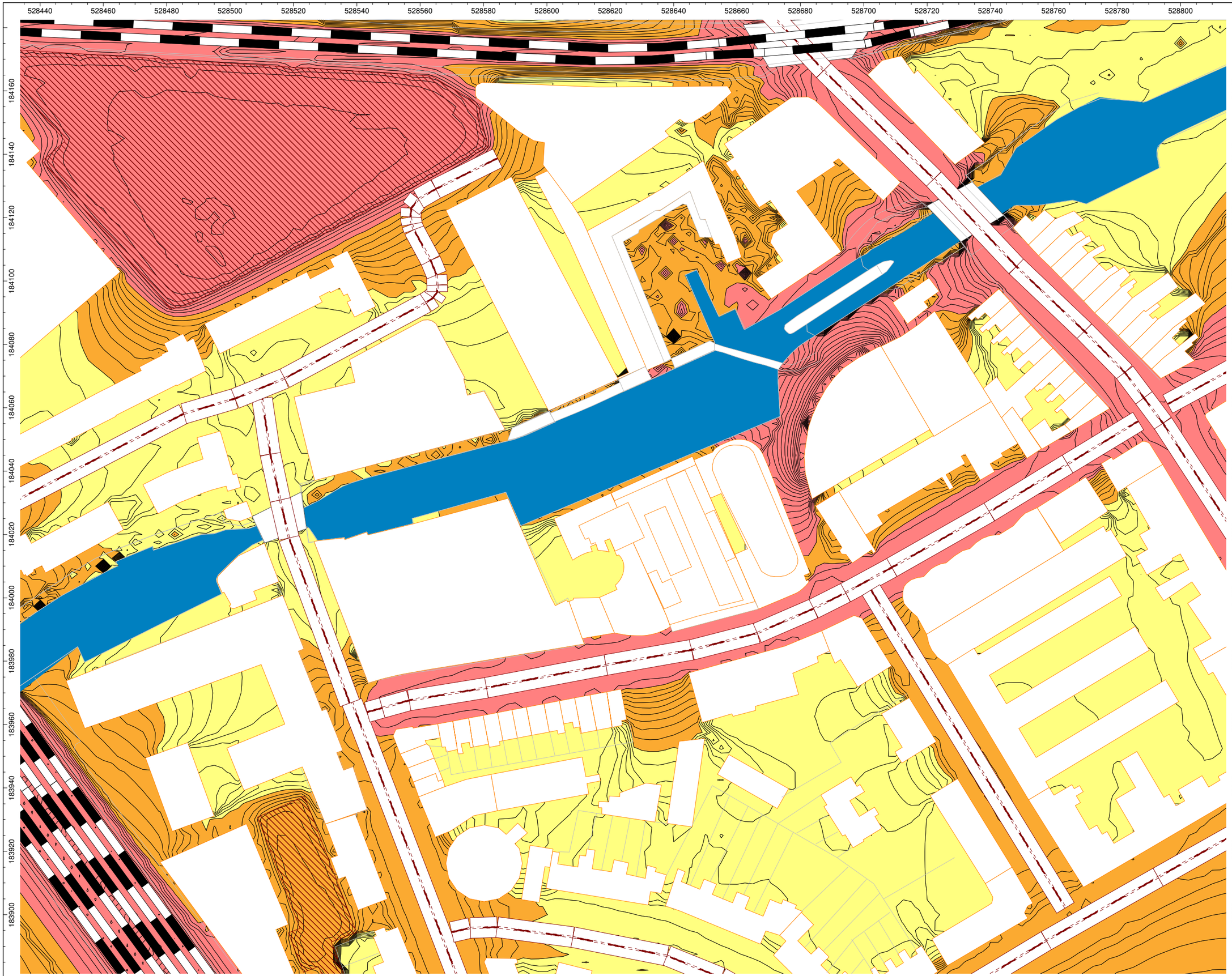

Client:
London & Regional (Bewlay House) Ltd.

Project:
32 Jamestown Road

Project Number:
A081532

Drawing Title / Scenario:
Night-time LAeq 8hr

Drawing Number:
SK04

Key:

- 0.0 - 45 dB
- 45.0 - 57.0 dB
- 57.0 - 66.0 dB
- 66.0 - 90.0 dB

Scale : Not to scale

Please note: Noise contour plots are for illustrative purposes only

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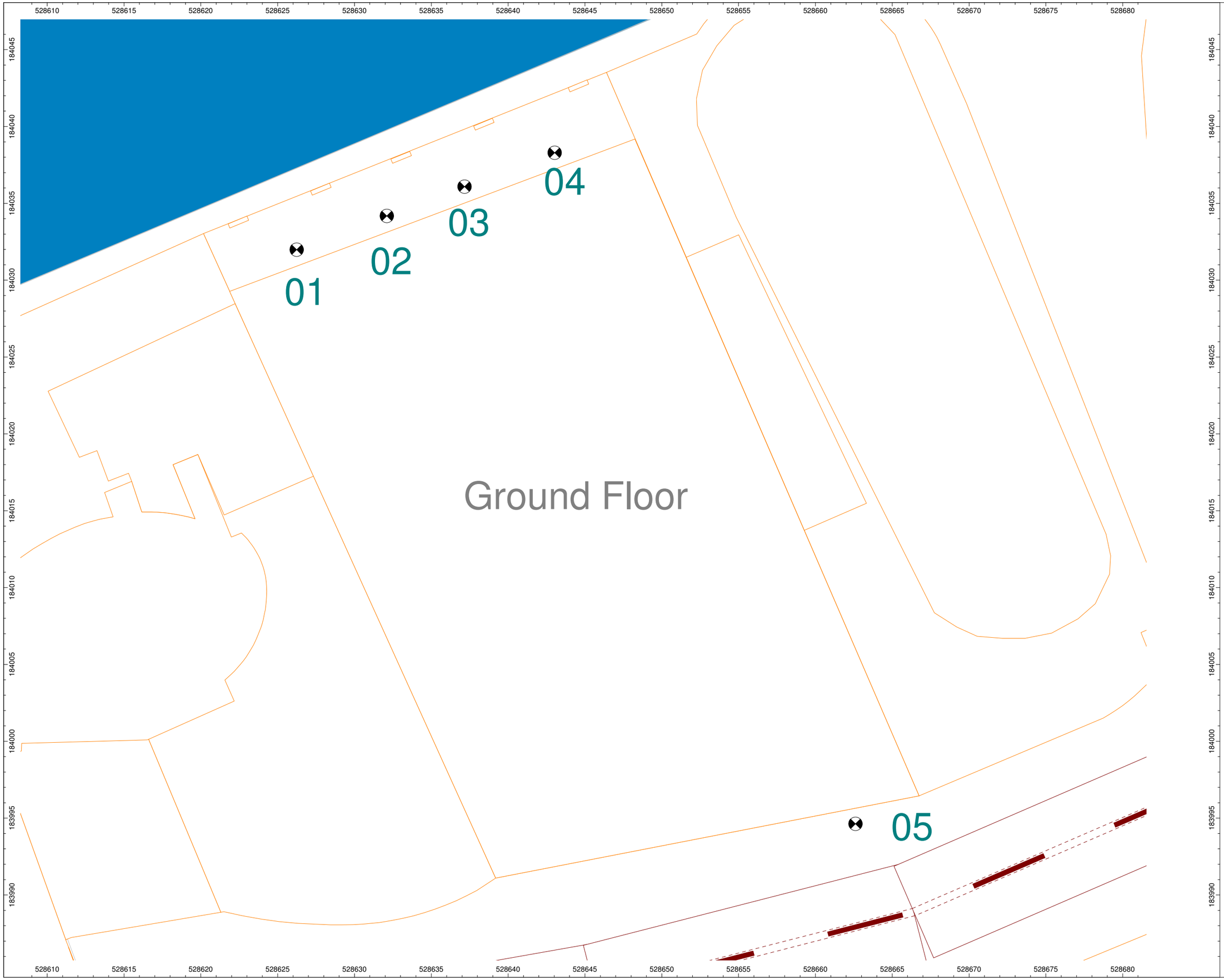

Client:
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Project:
32 Jamestown Road

Project Number:
A081532

Drawing Title / Scenario:
Ground Floor Receptor Locations

Drawing Number:
SK05

Scale : Not to scale

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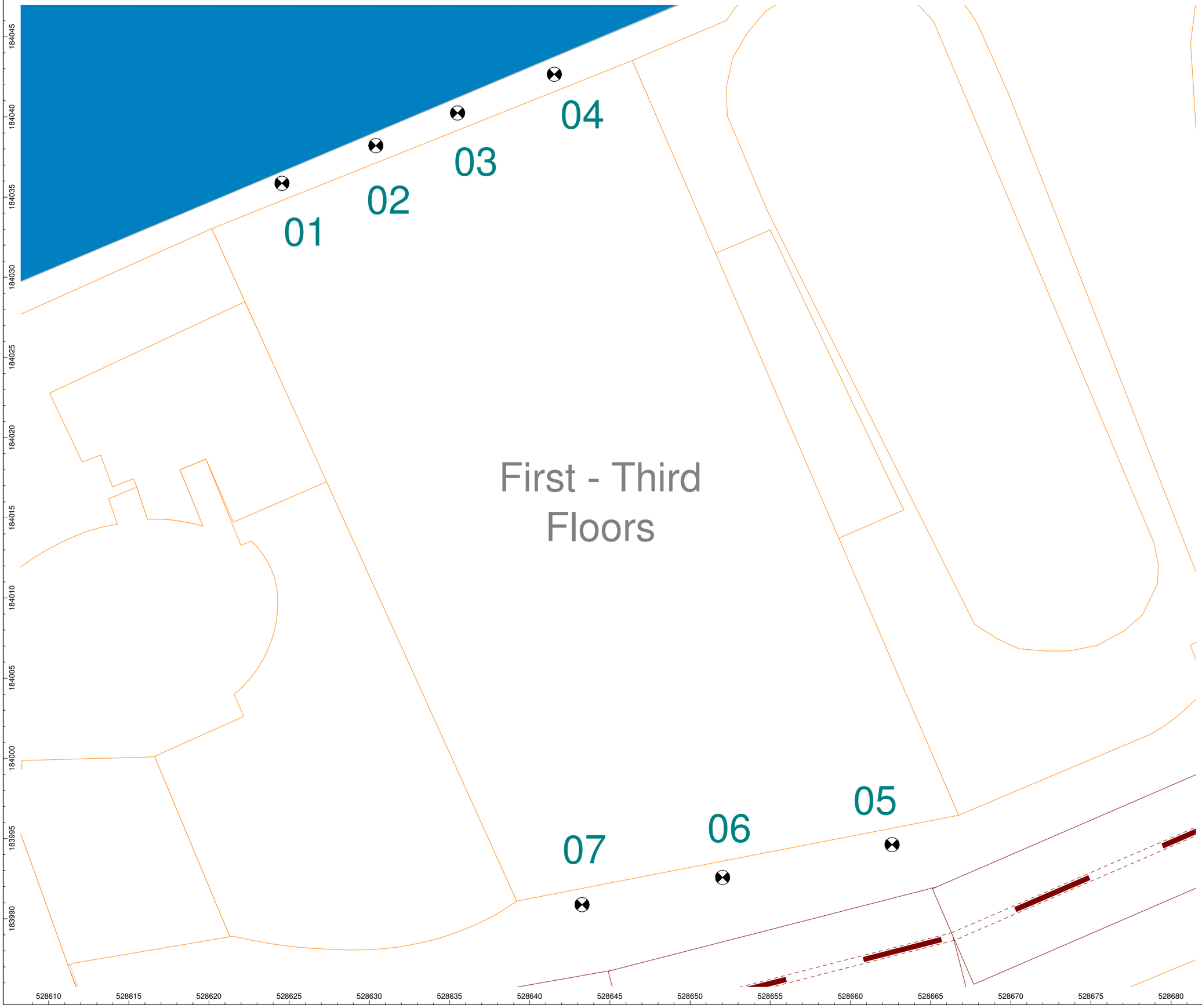

Client:
London & Regional
(Bewlay House) Ltd.

Project:
32 Jamestown Road

Project Number:
A081532

Drawing Title / Scenario:
First - Third Floor
Receptor Locations

Drawing Number:
SK06

Scale : Not to scale

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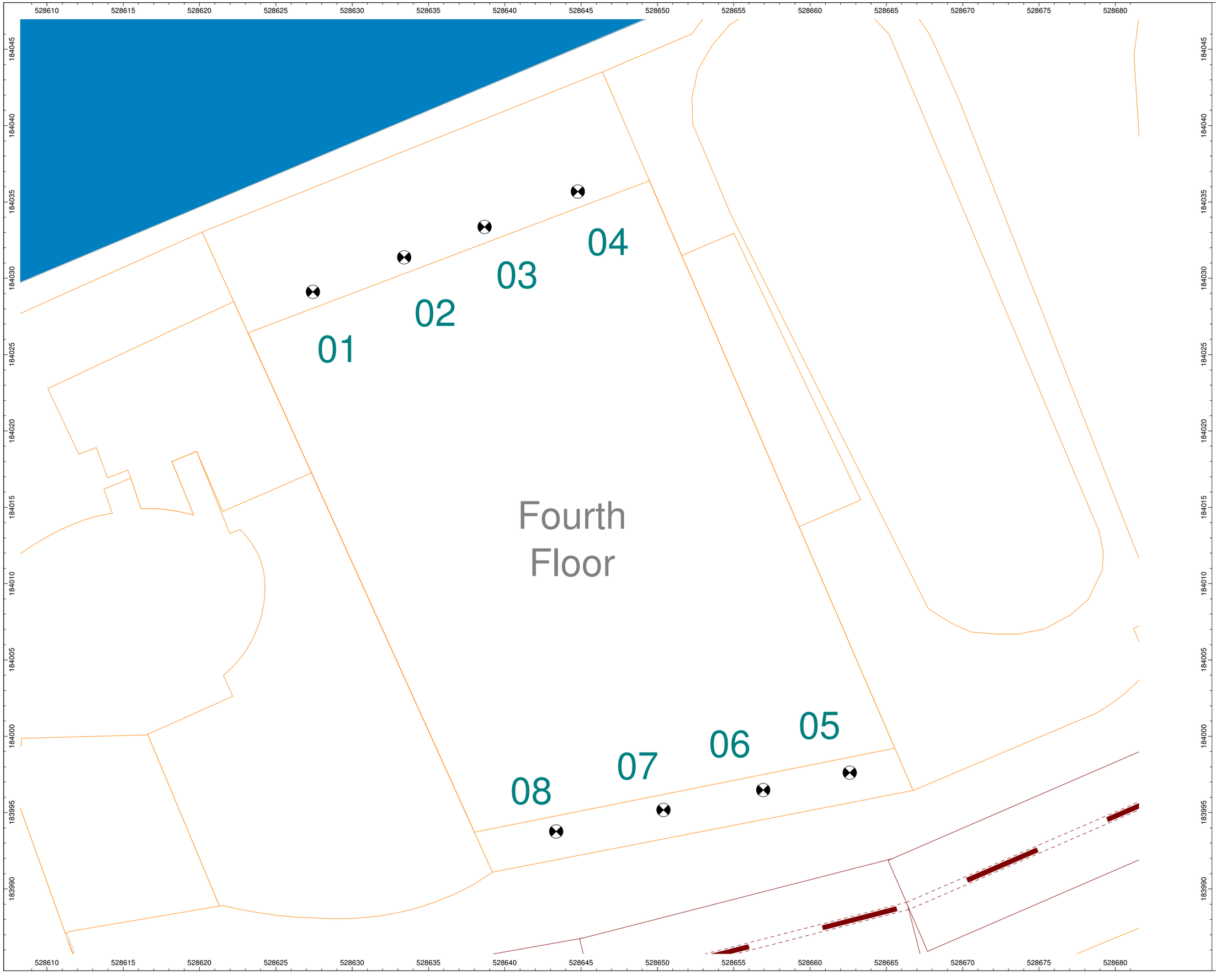
LE7 7GR
Tel 0116 234 8000



Client:
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(Bewlay House) Ltd.

Project:
32 Jamestown Road

Project Number:
A081532

Drawing Title / Scenario:
Fourth Floor
Receptor Locations

Drawing Number:
SK07

Scale : Not to scale

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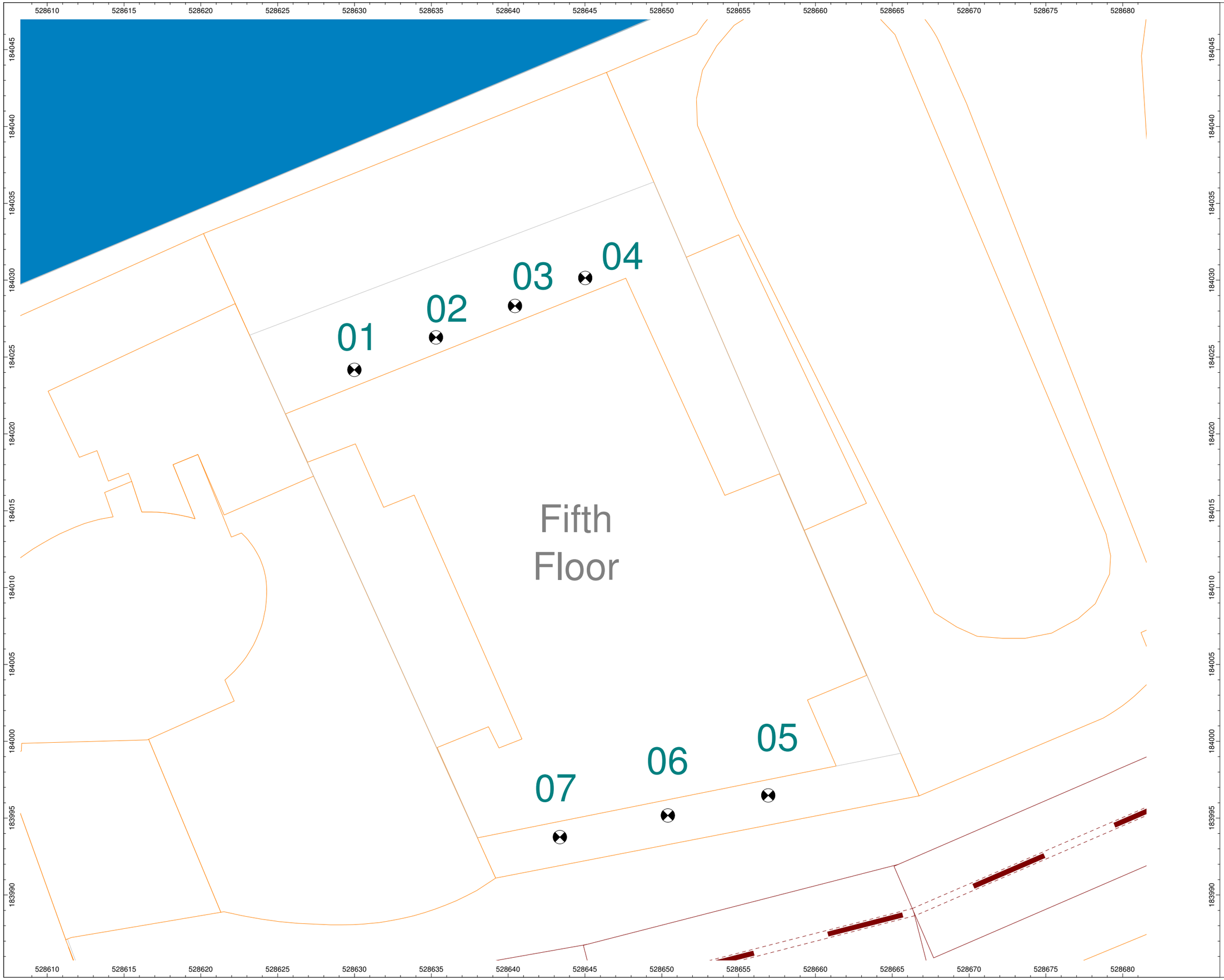
Tel 0116 234 8000



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Project:
32 Jamestown Road

Project Number:
A081532

Drawing Title / Scenario:
Fifth Floor
Receptor Locations

Drawing Number:
SK08

Scale : Not to scale

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