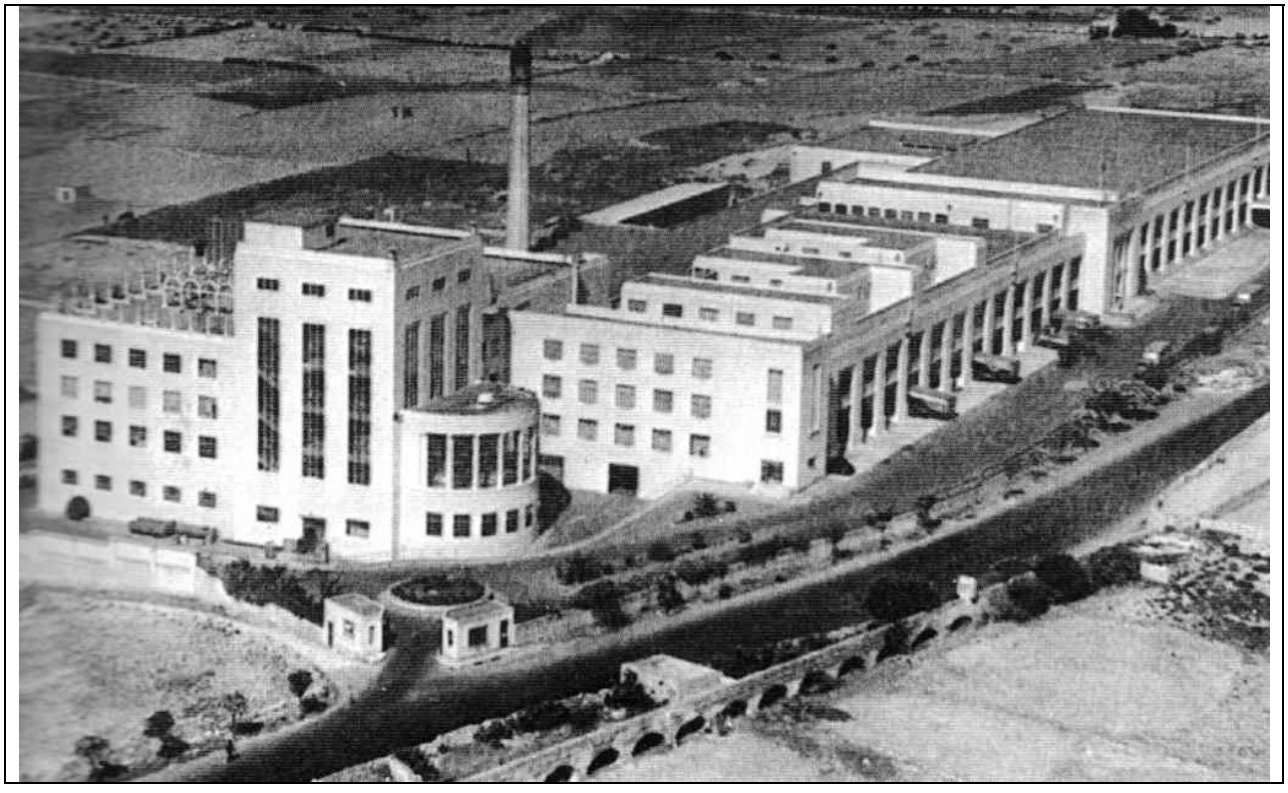
FARSONS BUSINESS PARK

PLANNING SUBMISSION
Trk 162479

PROJECT DESCRIPTION STATEMENT

Simonds Farsons Cisk plc
April 2016



1 REVISIONS LOG

Date	*Version*	*Amendment Details*
7 JUL 2015	1	*Project Description Statement*
17 DEC 2015		*Addendum to the Project Description Statement*
19 FEB 2016		*Update 1 to Addendum*
18 MAR 2016	2	Revised Project Description Statement
24 MAR 2016	3	Minor editing (typos).
11 APR 2016	**4**	**UPDATE 2 TO PROJECT DESCRIPTION STATEMENT (REVISED DRAWINGS SUBMITTED).**

PROJECT DESCRIPTION STATEMENT

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3 PREAMBLE

This document is the Project Description Statement for the planning application, presently bearing the reference **TRK 162479**, for the CREATION OF A BUSINESS PARK CONSISTING OF 7 BLOCKS OF CLASS 4A OFFICES, OVER 5 STOREYS WITH LANDSCAPED COURTYARDS OVERLYING *OFFICES, GYMNASIUM AND PLANT ROOMS AT LEVEL -1*; & A MULTI-LEVEL CAR PARK FOR 689 VEHICLES UNDERLYING CLASS 4A OFFICES AT TOP LEVEL. INCLUDING DEMOLITION OF EXISTING BUILDINGS BUT RETAINING SCREEN FACADE (LISTED GRADE 2).

As requested in the Screening Letter dated 31 July 2015, this document was prepared under Regulation 5 (1) of the Environmental Impact Assessment (EIA) Regulations, 2007 (SL 504.79; LN 114/2007). It consists of the sections, listed above in the Table of Contents, which consider the aspects identified in Regulation 5(3) (a) to (m) of the same Regulations.

4 THE DEVELOPER

The developer is Simonds Farsons Cisk plc, owners of the brewery complex at Mriehel, bounded by three roads, namely, Notabile Road, San Gwakkin Street, and 3rd September 1798 Street. The applicant is Louis A. Farrugia, chairman of the board, as the representative of the company. The Farsons Group is a pioneer in the development of industry in this country, and it has consistently adopted forward looking policies in its core business of the brewing, production, sales and distribution of branded beers and beverages, the importation, wholesale and retail of food and beverages, including wines and spirits, and the operation of food retailing establishments under franchise.

In order to maintain the Group as an important regional player within the food and beverage sector, the company has pursued an active export activity which is representing an ever-increasing proportion of the total production. This has meant an investment of almost €100 million over 25 years with the construction of state-of-the art brewing and beverage production facilities together with packaging plants to enhance its capacity and thereby the capability to reach its regional aspirations.

The construction of these new facilities has necessitated a profound re-think of the production processes and the rationalizing of the work flows. This has meant that buildings, which were previously of significant importance to the core business, gradually become redundant or surplus to requirements. At the same time, the Group is very conscious of its industrial heritage, its position as leading industry in the history of this country, and the cultural value of the redundant buildings to the company ethos as well as to the industrial heritage. It has therefore selected an architectural firm, Ian Ritchie Architects Ltd, following an international selection process in 2013, to lead a multi-disciplinary design team to produce ideas on how to make new use of the redundant buildings, how to restore and rehabilitate them, and how to add value to the company through their judicious adaptation. The brief also calls for state-of-the-art environmental technologies for the heating and cooling of the buildings which aim to set new green standards for the correct use of energy.

The **DESIGN TEAM** is the following:

Ian Ritchie Architects Ltd	Design team leader
TBA Periti	Executive engineers
Doug King Consulting	Building performance consultant
CASA Inginiera	MEP engineers
Ulrike Brandi Licht GmbH	Lighting design
Gillieron Scott Acoustic Design	Acoustic consultant
Joseph Borg	Landscaping consultant

5 General Objectives

The guiding philosophy is to rehabilitate and re-use the listed Grade 2 portion of the building, namely, the arcaded façade of the stores, offices, and engineers' residences in the west wing, with the old board room behind the central entrance. All of these components are listed given their exceptional quality, mostly unaltered, with their special interest interiors. In the West Wing the arcade-cum-façade will be retained, while the old offices, warehouse, and residences behind them will be demolished to make space for new rentable office spaces, separated by landscaped gardens. ***See* PLATE 1**

Great care will be taken to retain the integrity and unique aesthetic quality of the structures and the surrounding built environment. The new architecture will be of exceptional quality to match the visually striking Art Deco facades of the listed components. The challenge was to complement the qualities of architecture and materials of the Art Deco originals, but utilising a modern idiom while meeting and exceeding the environmental and infrastructure expectations of businesses. ***See* PLATE 2**

6 Present Characteristics of the Site

As described above, the site of the application lies within the Farsons Industrial Complex, operating principally as the (old) brewery and the related storage and packaging facilities (refer to drawing IRAL-00-08-0100 & 0102). ***See* PLATE 3**

The buildings forming the west wing behind the arcade are, at present, mostly underused because the administration tasks have moved to the new Logistics Centre, while the ground floor is still being used as storage, until the construction of new storage spaces to the west is completed. *See* PLATE 4

The site is characterised by the Art Deco façade of the arcade and the Brewhouse, facing north onto the internal road, parallel to Notabile Road. On the internal service road behind, also running east-west, parallel to Notabile Road, there are newer buildings in a modern idiom.

7 BRIEF DESCRIPTION OF THE PROPOSED BUSINESS PARK

The proposal for this part of the project is to dismantle the old unlisted rooms behind the listed arcade, after relocating the offices and stores, formerly accommodated here, to other modern buildings currently under construction. The spaces thereby created will accommodate new office floors in the shape of finger blocks, separated by landscaped courts.

The design inspiration for this layout comes from the traditional Maltese palaces with their protected gardens and internal courtyards. The footprint of the offices (perpendicular to the Arcade) is a concept adopted from the original architecture, most notably the engineers' apartments. ***See*** **PLATE 5** Each new office block (Blocks A1, A2, A3, B1, B2, and B3) is placed between the arcade to the north and the connecting walkways to the south. The walkways are a feature of the original layout, once functioning as the service corridor spines between the old brew house and the subservient buildings.

Typically, the new blocks A2 and A3 will be 16.90 metres wide by 30.50 metres long, rising to a height of five storeys above the general ground level (Level 0), and overlying a lower ground floor level (Level -1) was well as the plant room, where the floor level is set about 2 metres lower. The lower ground floor provides an uninterrupted office floor receiving natural light and air from the sunken gardens at either end as well as a central courtyard. There are, in addition, large roof lights inserted in the middle third allowing natural air to re-circulate via the overlying garden. In addition, there will be mechanical ventilation providing conditioned and fresh air to these spaces. This arrangement at Level -1 is repeated under blocks B1 and B2.

The floor-to-floor height is generally 3.70 metres which accommodates the structural zone and a raised floor (for running the ventilation and electrical conduits) leaving a clear floor-to-floor height of 3.00 metres. At Level 0 (ground floor) the clear floor-to-floor height is 3.40 metres, while in Level -1 this becomes 3.70 metres.

On the Notabile Road front (northside), the blocks A2, A3, B1, B2, and B3 are setback by 5.25 metres at Level 3, and by a further 6 metres at Level 4. In the case of office block A1, the external width is 13.45 metres, with a setback, at Level 3, of 5.75 metres from the east elevation facing the old brewhouse, which is a listed building. In addition, at Level -1 there will be a gymnasium (use Class 3C) underlying the office levels. These six blocks share four vertical circulation cores containing lifts and staircases. Their height above the highest point on the Notabile Road frontage does not exceed 17 metres. The height above the courtyard gardens will be 19.5 metres, which increases to 23.90 metres where the courtyards are sunken. The strategy to keep these buildings roughly one storey lower that the Old Brewhouse which is retained as the dominant feature. The main roof parapet level of the Old Brewhouse is +77.32 (the lift shaft is +79.33); that of the office blocks is +74.10. ***See*** **PLATE 6**

Block A4 lies behind the retained existing Boardroom and keeps its width of 12.60m. The boardroom is another of the scheduled portions of the brewery. Behind it to the south, that portion which is not scheduled will now accommodate a conference/meeting hall with supporting amenities, with overlying offices at Levels 2, 3 and 4.

Further to the west, but located to the south of the office blocks with a frontage on the internal street, there is block B4 containing seven levels of car parking, an overlying topmost floor containing offices, and repair workshops (dispense building) down below at the level of the internal street. ***See*** **PLATE 7** The car

park is linked with the spine walkways *See* PLATE 8 at each level to make it simple and easy for car users to reach the office levels they desire via the lift cores. The roof parapet level on this block is +78.10; still lower than the +79.33 of the Old Brewhouse lift shaft.

Following is a detailed schedule of the areas proposed.

SCHEDULE OF AREAS
GROSS & NETT INTERNAL AREAS (as per RICS Code of Measurement 6th Edition)

	GIA m^2	NIA m^2
NEW OFFICES (Block A)		
Block A1	1,398	1,298
Block A2	2,118	2,017
Block A3	2,118	2,017
Block A4	509	448
Total Areas Block A	**6,143**	**5,780**
NEW OFFICES (Block B)		
Block B1	2,118	2,017
Block B2	2,118	2,017
Block B3	1,693	1,597
Block B4 (above car park)	1,994	1,908
Total Areas Block B	**7,923**	**7,539**
LOWER GROUND FLOOR OFFICES		
Block A	1,023	992
Block B	1,023	992
Total Areas Level -1	**2,046**	**1,984**
NEW OFFICES TOTAL	**16,112**	**15,303**
CONFERENCE FACILITY		
Block A4 Existing Building	333	
Block A4 New Building	349	
Circulation & Service areas	*58*	
Total Areas Conference Facility	**682**	
PLANT SPACES & FACILITIES		
Basement Plant Room	1,610	
Switchgear Room	59	
Generator Room (beneath car park)	113	
Security Office (car park entrance)	42	
Electrical Sub Station (car park entrance)	33	
Gymnasium (under Block A1)	313	
Total Areas	**2,170**	

CIRCULATION, LIFTS & STAIR CORES	GEA m^2
Stair cores (4 in number)	588
External Walkways South Level 0	544
Level 1	507
Level 2	507
Level 3	490
Level 4	521
Level 5	539
Total Areas	**3,108**
BUSINESS PARK TOTAL	**22,072**

CAR PARKING	Nr
Colonnade parking	23
Multi-storey carpark	679
Total Parking	**702**

8 PROJECT TIMING

As explained elsewhere, several enabling works have to occur before the present buildings, earmarked for demolition, can be fully vacated. Therefore, linked inextricably with this proposal are the following projects: Construction of a new distribution centre (***PA/02444/05***); Construction of a new Brewhouse (***PA/03145/09***); New beer packaging hall and stores (***PA/02436/13*** & ***PA/01878/14***); Additional floors to Logistics Centre (***PA/00349/15***); Demolition of existing dispense and creation of new underground storage (***PA/02731/15***). All of these enabling works have to be in place, or well advanced, so that work can start on the office blocks, as indicated below.

- Demolition work in Blocks A & B to start in April 2017.
- Demolition of workshops to start in December 2017.
- New office buildings A2, A3, A4 to be completed October 2018.
- Carpark building B4 to be completed January 2019.
- New office buildings B1, B2, B3 to be completed January 2020.

9 DESCRIPTION SURROUNDING LAND USES

Across Notabile Road, beyond the aqueduct, lies the residential area of south Birkirkara. The connection and permeability of the application site with this area is practically non-existent. Both sides can see each other across the road, but hardly any interaction can take place. The entrance to the complex is concentrated on the east boundary. *See* **Plate *9*** Further to the east, across Triq San Gwakkin, there are showrooms and offices, always fronting Notabile Road, which give way abruptly to the factories lying in

that portion of the Mriehel Industrial Area administered by Malta Industrial Parks Ltd. At the extreme east end of the Industrial Area, towards the BOV Headquarters, there are more offices creating a buffer with the residences on Cannon Road.

To the west, along Notabile Road, there are several showrooms, extending up to the Malta Financial Services Centre building. The commercial zone runs as a strip right round the Industrial Area, along the Mriehel Bypass on the south boundary. This strip contains several sizeable showrooms and office buildings.

To the south of the Farsons Complex, there are small and medium industrial or semi-industrial enterprises, characterised, as one moves south, by ever-increasingly non-descript buildings.

10 Planning Policy Context

In view of the ever-evolving situation in the fields of employment and manufacture, the Central Malta Local Plan recognises that flexibility in the provision of work spaces is inevitable. It consequently makes a timid approach in the wording of policy **CG14** and allows a variety of seven types of uses within the Birkirkara, Mriehel area. Similarly, policy **CG15** allows differing use classes in, among others, the MIP estate and the SME sites forming part of the Mriehel Industrial estate. The provisions of this policy, as set out in the CMP Area Policy Map BKM2, ***See* PLATE 10** have been revised and amended in virtue of the application **PC/00057/10**, approved in September 2011. The changed zoning is shown in Map PC57/10/02 which amends Map BKM2. ***See* PLATE 11**

The old industrial building is now zoned for commercial, as well as industrial, use. This is set out explicitly in Article 4 of policy **BK04** of the CMLP. Subsequent to the amendment mentioned above, in November 2014, MEPA was requested to clarify the commercial zoning, and it was confirmed that office development is acceptable as a commercial typology within this zoning category.

We feel that there could be no better location for the proposed office use. The site is strategically located in the centre of the island, with easy access to the main routes to the southern residential reservoirs beyond Qormi, as well as the northern residential areas like Attard, Mosta, and Naxxar, and even beyond. To the south lies also the airport. At the same time, the office use is a preferred alternative to the previous industrial activity, which now shifts southwards some more distance away from the residential zone across the street. It is our opinion that such a project as this becomes a trend-setter and the high standards targeted would serve as an incentive to other developers to follow suit.

Policy **CG10** (in the Central Malta Local plan) talks about new uses for historic buildings and lays down the criteria to be adopted in the re-use of scheduled buildings. In the case of the Business Park, the rhythm of the listed arcade, which will be retained and restored, establishes and dictates the widths of the office blocks and the intervening landscaped courtyards. Therefore the building form of the business park is principally dictated by the arcade, which becomes the element that binds and unifies this part of the project, both physically and historically. This is in line with Thematic Objective 8 and Urban Objective 2 of the Strategic plan for the Environment and Development.

It is useful also to refer to **Section 22**, hereunder, to understand the route which is being traced out for Mriehel and the vision for the whole estate, which certainly goes beyond the policies in the CMLP. This vision is now being administered and driven by the Mriehel Foundation.

11 Planning Policy on Height Limitation

The area of the Farsons Complex, in total exceeds 69,000 square metres, while the portion devoted for the Business Park is 16,455 square metres. According to policy **CG14**, in the CMLP, certain criteria have to be satisfied if exceeding the usual height limitation is to be considered (Article 4, CG14, as amended 25 January 1012). These criteria are the following: (a) best practice in terms of environmentally sustainable design, (b) neighbour compatibility, (c) construction and operational management; (d) architectural design of exceptionally high quality; (e) short and long distance visual impacts are satisfactorily addressed; (f) a significant and well designed public open space is incorporated; (g) the proposal does not constitute over-development. These issues are treated under separate headings, in **Sections 12 to 18**, hereunder.

12 Environmental Design

The philosophy of sustainability recommends the consideration of the whole-life cost of the building, both in terms of economics and environmental impact. Since this project has the preservation of heritage at heart, in addition to the creation of unique, new office spaces, more attention than usual has been paid to the standards of construction and the efficiency of the systems so as to minimise resource consumption during occupation. While the normal practice locally is to design building services systems to achieve constant indoor conditions against the most severe external conditions, this project uses dynamic analysis of weather conditions and the thermal response of the building to assess the likelihood and impact of variations in internal comfort conditions Adopting a dynamic analysis allows the design team to reduce the capacity of plant and equipment by eliminating unnecessary oversizing, and to estimate future energy consumption accurately.

A full building analysis was commissioned in the UK, and the building was modelled using IES <**virtual environment**> dynamic thermal modelling software version 2015.0. The model was used extensively through the design stage to test propositions for the design against the performance of the buildings in terms of maintaining indoor comfort and minimising energy consumption. The geometry of the buildings was recreated in the analysis model, and the energy performance characteristics of surfaces, ***See* PLATE 12** such as walls and windows, were assigned. Portions of the building construction were studied in detail, including the solar shading and the incorporation of insulation in the wall construction. Solar shading studies were also undertaken and used to optimise the shading design. ***See* PLATE 13** The model can also be used to make predictions of the whole building carbon dioxide emissions at future stages of design.

In summer the maximum temperatures range typically from 28-34°C during the day to 20-24°C at night. The diurnal range suggests that passive cooling thermal mass can contribute to the cooling load of office buildings, but cannot alone deliver a comfortable internal climate. The summer design conditions for air conditioning are 32°C, 45%RH and 28°C, 75%RH with 1% annual exceedance. The winter temperatures range typically from 12-20°C during the day and 7-12°C at night. The heating design temperature is 7°C with 1% annual exceedance. With standards of insulation equivalent to current UK Building Regulations, office buildings in Malta should be capable of deriving sufficient heat from occupation to maintain internal temperatures in winter without supplementary heating.

There is an established expectation of air conditioning for commercial buildings in Malta, and those to be built for the Brewery Park development will need to comply with this market expectation. However, we

do not believe that it is necessary to chill buildings to North American standards to satisfy this expectation. The design team has therefore proposed to control indoor temperatures according to the established adaptive comfort approach. The adaptive comfort approach has been developed following academic research on the preferred indoor temperatures in relation to variations in climate and outdoor air temperature. This approach adjusts the indoor temperature to follow the change of seasons, rather than fixing it at a condition which is unnecessarily warm in winter and too cold in summer. This approach responds both to the physiological and clothing adjustments that we make in response to seasonal changes and allows considerable savings in operational energy to be achieved, whilst delivering a more comfortable overall experience for occupants. *See* PLATE 14

The design of the office blocks utilises the principle of a thermally activated building system, called TABS for short, which relies on a combination of ventilation, delivered using a raised floor as a plenum, dehumidified fresh air supply, and cooled ceilings providing a low-energy source of local cooling. Fresh air will be drawn from roof level through the core shafts and discharged to the same point. The air-handling units will be located in the basement plant room and will be equipped with a highly energy-efficient twin-wheel energy recovery system. A cooling coil will allow the fresh air to be dehumidified when required at peak conditions by cooling below the dew point. This will over-chill the fresh air so a second heat-exchange wheel will then re-warm it through the heat recovery from the exhaust air. The de-humidification will be achieved passively for most of the time, and, during peak summer conditions, when refrigeration is necessary for dehumidification, the surplus cooling energy will be recovered. *See* PLATE 15 Some data used in the design so far is shown hereunder:

Ventilation Rate	15 litres/second/person

Summer	Interior 25°C at 50% R.H.	Exterior 35°C at 35% R.H.
Winter	Interior 21°C at 5°C External	Exterior 5°C

COMPONENT	U VALUE
WALLS	0.25 W/m^2.K
ROOF	0.20 W/m^2.K
GLAZING (double with thermal break)	2.00 W/m^2.K

BENCHMARK AND TARGET CARBON PERFORMANCE		
Occupancy	**UK Benchmarks**	**Farsons Target**
General office	75 kg.CO	60 kg.CO
General retail	91 kg.CO	77 kg.CO
Hospitality	128 kg.CO	109 kg.CO
Visitor experience	77 kg.CO	62 kg.CO

The developer is aiming to eventually achieve BREEAM certification. At design stage, an EXCELLENT rating was achieved.

13 NEIGHBOUR COMPATIBILITY

The neighbours to this development need to be defined before the impacts can be assessed. There are the immediate neighbours within the Farsons complex itself. There are then the neighbours to the south and east lying within the industrial estate. Finally there is the residential area to the north beyond the line of the old aqueduct. The compatibility with the neighbouring buildings and uses, both inside the site, as well as outside it, is ensured by the fact that the office blocks are screened by the arcade, and, where their height exceeds that of the arcade, they are set back on two successive storeys. In any case, the height of 17 metres above the street level on Notabile Road is always below that of the old brewhouse which remains the dominant feature of the project and of the complex.

The fact that the office blocks are sandwiched between the arcade to the north and the existing Farsons buildings to the south ensures that visibility is very much contained. A simple walk-by along the aqueduct from east to west, and even beyond it, in the residential streets of Birkirkara will indicate that the whole Farsons complex is screened from view both by the aqueduct itself, and by the mature trees on the Notabile road centre-strip and the Farsons boundary wall. This can be judged in the Visual Assessment photomontages submitted under separate cover.

Apart from the potential visual impact, one has to assess the suitability of the proposed uses and any other environmental impacts generated by the uses. The vehicular traffic is the subject of a Traffic Impact Statement submitted under separate cover. The office use does not generate any obnoxious fumes or other emissions; therefore it can live perfectly well with the neighbouring residential area. An acoustic study has been carried out to assess what noise levels will be generated by the proposed use, and if and how these might impact the residential area. The study has also looked at the noise levels generated by the present traffic flow and how this affects both the proposal and the residential areas.

14 CONSTRUCTION AND OPERATIONAL MANAGEMENT

The management of the construction phase is based on the following points: (**a**) There is sufficient space inside the Farsons complex for no building activity or vehicles to take up any of the public roads; loading and unloading will take place inside the site and there is only one point of interface with the public roads. Farsons have already put in place a plan to create two streams of traffic, one for its operational vehicles and one for the construction vehicles. This will be amply elaborated in the eventual construction management plan; (**b**) The spoil from demolition is quite contained because the west wing to be demolished has a lot of open spaces and few dividing walls; (**c**) There will be limited excavation, needed only for the creation of the reservoirs, and to bring the level of the proposed car park to that of the access road. This means a reduced amount of spoil to be disposed of.

The main construction access will be created on Triq San Gwakkin, downhill from the present main gate, to avoid being so close to the corner. The operational vehicles will use the gate on Triq 3 ta' Settembru 1798, and the secondary gate to the Farsons Direct area. A provisional explanatory site logistical layout and sequence is attached. *See* **PLATES 16 to 21** This was presented to the management of the developer to explain how the project could be executed in parallel with the continued manufacturing operation.

The management of the Business Park will be by a separate (managed and funded) company within the Farsons Group that will ensure that the best sustainable management standards will be applied. The applicant intends to hold the newly-created asset for the long term and will consequently invest in excellent management standards. An on-site management team will be created with the constituents handling the technical engineering, commercial, and general maintenance disciplines.

A sophisticated building management system (BMS) will be installed with the objective of substantially reducing energy operating costs through solar gain control and heat exchange systems, explained in more detail in Section12 above. The fitting out of the office spaces by the individual tenants within the blocks will be closely controlled to minimise neighbour nuisance.

The Business Park will adopt particular initiatives related to sustainable transport and travel to work. Dedicated parking spaces for electric and LPG-powered cars (with charging outlets), as well as bikes and motor bikes will be provided. A Farsons intranet will promote initiatives such as car pooling and sharing; initialising a special route bus services (public transport) between Mriehel and a number of outlying residential areas.

The applicant intends to position the Business Park as a destination for international and local tenants where their complete work experience, such as conference and meeting spaces, food and beverage spaces, gymnasium and crèche, will be provided. This will help to reduce the need for travel to and from the site during a typical business day.

15 Visual Impacts

A Visual Assessment, by means of photomontages, is submitted under separate cover. We have argued earlier in this document that the building is screened on all four sides because of its very location. Therefore short and middle distant views are very much contained. The long distance views do not show any significant impact because of the medium-rise configuration. Please refer to the separate Visual Assessment.

16 High Quality Design

The layout of the office blocks, their width, and that of the intervening gardens, is governed by the rhythm of the arcade. ***See*** **PLATE 22** In this very civilised and intelligent way, the proposed development relates seamlessly to the pre-existing arcade and enriches its importance as a listed element, even more than the present storage spaces. In this way, the line dividing the modern intervention from the scheduled element becomes indistinct. ***See*** **PLATE 23** It is good to note that the original building of the late forties had a similar arrangement.

The height of the blocks is handled in a sensitive way. The first three storeys are concealed behind the arcade. There is then a set-back of 4.00 metres at fourth floor and another set-back of 6 metres at fifth floor. The arcade is not engulfed but blends with the new development. No strong statement here but effortless fusion. The restricted height enables the proportions of the garden spaces to be quite generous and amenable. ***See*** **PLATE 24** With a maximum wall height of 19.80 metres and a width of 13.50 metres, the width to height ratio is 1:1.47. ***See*** **PLATE 25**

The elevational treatment is simple and minimalist, relying on good proportions to emulate the Art Deco setting. The facades are enriched by the shading devices, different in treatment on the east and west elevations, in line with the findings of the thermal model studies. The west elevations ***See* PLATE 28** have deep projecting fins against the afternoon sun, while the east elevations ***See* PLATE 27** have shallower fins catering for the morning sun. *See* PLATE 28

17 PUBLIC OPEN SPACE

The public open space is provided in the form of the six gardens, which, on their own, and discarding the other landscaped areas along the north access road, have a total area of 2856 square metres, or 2.54 *tumoli*. The pedestrian entrance between the public pavement and the Farsons grounds will now be shifted to directly in front of Block A4, and will take the form of a gracious, twin staircase. This will enable the general public to enjoy the spaces being provided.

18 NO OVER-DEVELOPMENT

To avoid making subjective assessments of the densities of the office blocks, we shall adopt the definitions used in the document British Council for Offices, Occupier Density Study 2013 and derive some comparisons. Ignoring the substantial set-backs at levels 4 and 5, each floor plate in a block measures 15.8 metres wide by 30 metres long internally. This gives an area of 474 square metres (of which a small portion is the ventilation and lavatory core, ignored for this exercise). The typical option office furniture layouts presented to the developer by the design team have an occupancy ranging between 28 and 45 workplaces. This gives a work place density of 1 workplace per **16.9** square metres as a minimum, and 1 workplace per of **10.5** square metres as a maximum. The BCO Study 2013, mentioned above, gives a mean density of 1 workplace per **10.9** square metres of net internal area in the United Kingdom.

The *notional* population of the blocks can now be derived by the dividing the total net internal area of the offices, amounting to 13698 square metres, by the two workplace densities calculated above. This gives us a minimum of 810 persons and a maximum of 1304. Since the office blocks and car park, including the gardens in between, have an overall footprint area of 8703 square metres, we can say that the population density ranges from 10.7 persons per square metre of footprint to 6.7 persons per square metre. Considering the amount of open spaces proposed and the medium-rise nature of the blocks, the figures show that the density is amply in line with, if not better than, international averages.

19 UTILITIES

This topic has been handled extensively in the already submitted Utilities report (*TRK 162479, document 1bz*). All the relevant information will be found in this report, and reference is made to this document to avoid unnecessary repetition.

20 EMPLOYMENT FORECASTS

The preliminary employment forecasts, prepared for the internal feasibility studies by the applicant's management team, give the following figures:

- Business Park management team 11

21 MAJOR IMPACTS

The environmental and other impacts this proposal is expected to generate are the following:

- Pressures on Land Use
- Traffic generated during Construction
- Traffic generated in the course of Operations
- Noise and vibrations during Construction
- Ventilation & Plant noise
- Air pollution
- Other

LAND USE – The industrial and commercial uses allowed in Area B of PC57/01 may encourage further investment in commercial activities, possibly resulting in pressures on the current or planned uses outside this zone. Some of the smaller SMEs might be pushed out of contention. At the same time, one has to consider that there is no other site, in this locality, which enjoys the large area that the Farsons complex has. This may put a brake on increased investment, always depending on the performance of the economy, the balance between supply and demand for commercial property, the perceived desirability of the area, and the relative costs of land and property. If such changes are to be resisted this can only be done through the planning system and environmental constraints.

It is to be expected however that investment in the Industrial and Commercial Area will follow the path blazed by this project which will gradually but surely result in a gradual upgrading of the estate. This connects to the ultimate vision touched upon in Section 22 hereunder.

CONSTRUCTION TRAFFIC – The Traffic Impact Statement being prepared separately from this document deals with this issue in substantial detail both quantitatively and qualitatively. This document will be uploaded to the MEPA web site shortly. The developer has a proven history of setting high score on the correct and proper performance of contractors who will be bound contractually to abide by comprehensive regulations concerning maintenance of vehicles, equipment, safety etc. See also Section 14 above.

OPERATIONS TRAFFIC – Again this topic is tackled exhaustively in the Traffic Impact Statement and therefore reference is made to it. As stated above in Section 14 the vehicular accesses to the office blocks and to the Farsons production buildings will be totally different. The first will be located on Triq San Gwakkin; the second will be the present gate on Triq 3 ta' Settembru 1798.

CONSTRUCTION NOISE - The major source of construction noise on this site would be the demolition of the west wing blocks and the excavation of the plant room space. The other phases of construction will

generate noise but this will be limited to cranes and mixer trucks during concreting of foundations, columns, and slabs. The actual site is very much constricted because it is hemmed in by Farsons buildings on the west and south; also by the old brewhouse to the east. The extensive tree planting along the Notabile Road centre strip, on the northern sidewalk of the same road, and the aqueduct all serve to mitigate noise travelling in the direction of the residential area. Again, the contractors will be bound contractually to observe scrupulously the requirements of the Environmental Management Construction Site regulations (SL 504.83; LN 295/2007) and the Occupational Health and Safety Regulations (LN 281/2004). Apart from insisting on the use of recently-manufactured and well-maintained machinery, other mitigation measures will be appropriate hoarding systems around noisy areas, the use of extra silencers on machine exhausts, and the avoidance of noisy work on weekends and public holidays. This would eventually be handled in the Construction Management Plan.

VENTILATION NOISE – The bulk of the ventilation and conditioning equipment will be located in the basement plant room. Therefore noise nuisance to neighbours will never be an issue. On the individual office blocks there will be 1 unit (chiller) on each.

AIR POLLUTION – Construction work normally generates dust during demolition and excavation. This dust will be experienced through airborne distribution or will be carried off with the rainwater run-off. To avoid airborne dust, spoil heaps have to be dampened with water spray to bind the particles together. The heaps should be carted away off site as quickly and as regularly as possible, with the load boxes properly covered with tarpaulins. The wheels of trucks and earth-movers exiting the site should be power-washed with the washings collected in settling tanks. Because of the mode of construction, there will be no loose aggregates stockpiled on site. All concrete for columns, slabs, and foundations will be shipped in ready-mixed from the plant yard. The walls of the blocks will be in precast concrete load-bearing panels. No chasing work for electrical layouts will be required as all runs will be run on wall or floor surfaces (concealed by raised flooring). Plastering will be done under shelter and all material will be delivered in bags on pallets.

22 MRIEHEL ENTERPRISE ZONE

The government and the private sector, which includes the applicant who is actively participating, are working on a joint high-level initiative aimed at the re-branding of the Mriehel Industrial Estate as an innovative business hub and commercial centre, capable of attracting high value-added investment, resulting in a general benefit to the community. This public-private partnership will lead to the formation of the Mriehel Enterprise Zone Foundation with the sole purpose of formulating short, medium and long term visions for the Estate.

In the short to medium term, the emphasis of the foundation will be to improve security, improve the present visual environment, and waste management, among others. In the long term the foundation will formulate a vision underpinned by these core principles:

- A development that can embrace both private and public investment in a common goal of economic and urban growth responsive to international business and investment potential.
- A city-grid structure that deals with the scale of industrial and commercial activity and the public realm to allow a diversity of micro-planning and design generating a rich urban development.

- The use of topography to locate taller buildings with the aim of avoiding intrusion or impairment in important view corridors.
- The use of topography to create and economic vehicle and servicing infrastructure.
- An environmental vision that draws on traditional urban qualities – landscaped public promenades and private gardens.
- A focus on an integrated pedestrian, cycle and public transport modes.
- An environment that can be phased from strategic nodes of existing and ongoing investment.
- Adaptability to investment demand at the same time maintaining an excellent environmental quality at all stages of the realisation.

23 APPENDIX WITH ILLUSTRATIONS

Please see accompanying document containing the illustrations.

PLATE 1	VIEW OF MODEL – WHOLE SITE
PLATE 2	VIEW FROM THE NORTH
PLATE 3	SITE BLOCK PLAN
PLATE 4	DEMOLITION PLAN
PLATE 5	OLD PHOTO OF THE BREWERY
PLATE 6	OFFICE BLOCKS VIEWED FROM THE NORTH (BIRKIRKARA)
PLATE 7	CAR PARK BLOCK B4 SOUTH FAÇADE
PLATE 8	WEST FAÇADE (CAR PARK ON THE LEFT)
PLATE 9	EAST ENTRANCE INTO THE SITE
PLATE 10	MAP BKM 2
PLATE 11	MAP PC57/10/2
PLATE 12	SCREEN SHOTS ENVIRONMENTAL ANALYSIS GEOMETRY
PLATE 13	SCREEN SHOTS SUN SHADING STUDIES
PLATE 14	ELEMENTS CONTRIBUTING TO ENERGY SAVINGS
PLATE 15	ADDING THE IT & EQUIPMENT ENERGY REQUIREMENT
PLATE 16	CONSTRUCTION PHASING STEP 1
PLATE 17	CONSTRUCTION PHASING STEP 2
PLATE 18	CONSTRUCTION PHASING STEP 3
PLATE 19	CONSTRUCTION PHASING STEP 4
PLATE 20	CONSTRUCTION PHASING STEP 5
PLATE 21	CONSTRUCTION PHASING STEP 6
PLATE 22	ARCADE MODULE ORGANISING THE LAYOUT
PLATE 23	ARCADE MODULE IN DETAIL
PLATE 24	ARTIST'S VIEW OF TYPICAL GARDEN
PLATE 25	TOP VIEW OF GARDENS
PLATE 26	SHADING FINS ON WEST ELEVATION
PLATE 27	SHADING FINS ON EAST ELEVATION
PLATE 28	TOP VIEW OF BLOCK A1

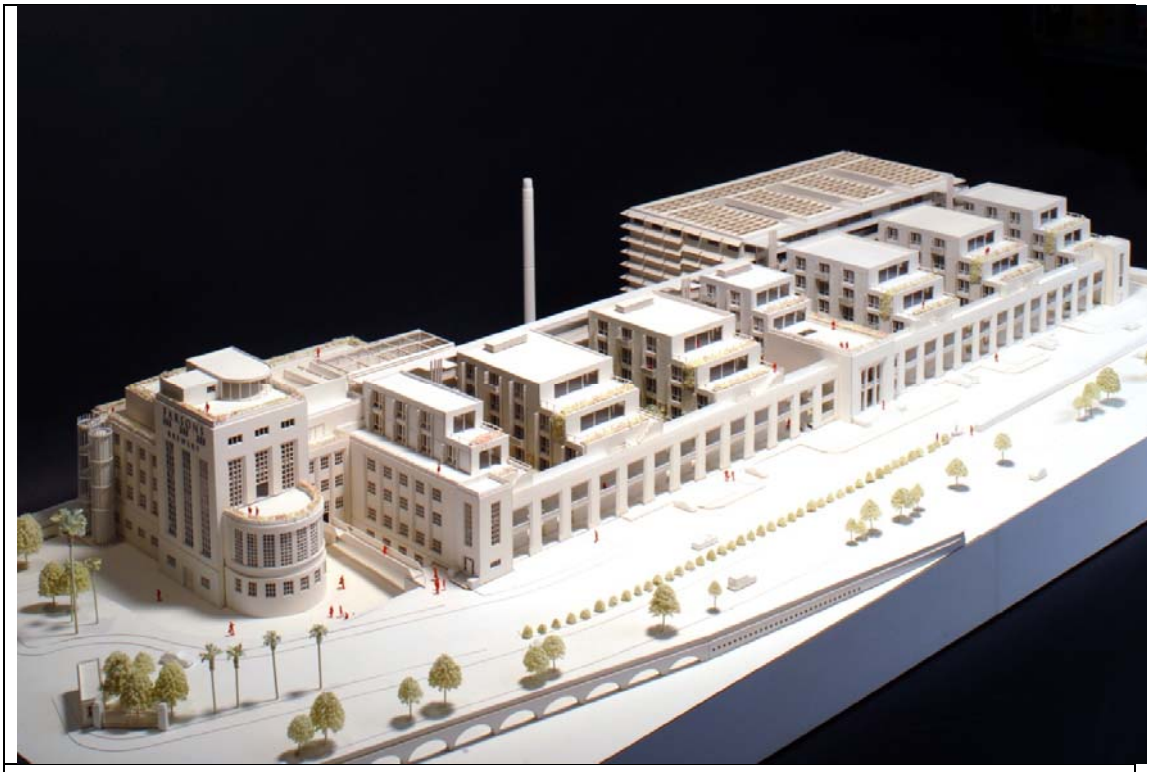


PLATE 1 – VIEW OF MODEL WHOLE SITE

PLATE 2 – VIEW FROM THE NORTH

PLATE 3 – SITE BLOCK PLAN

PLATE 4 – DEMOLITION PLAN

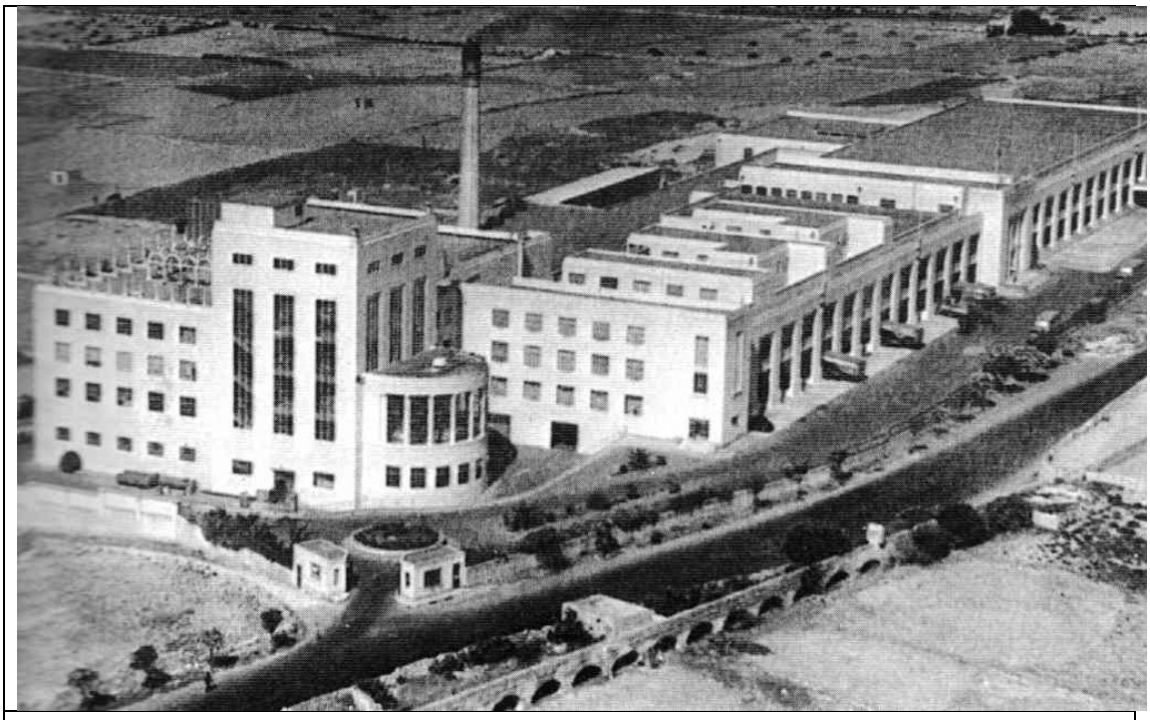


PLATE 5 – OLD PHOTO OF THE BREWERY

PLATE 6 - OFFICE BLOCKS VIEWED FROM THE NORTH

PLATE 7 CAR PARK SOUTH FAÇADE (PHOTOVOLTAICS ON THE ROOF & ON LOUVRES)

PLATE 8 - WEST FAÇADE (CAR PARK IS ON THE LEFT, WALKWAYS IN THE MIDDLE)

PLATE 9 – EAST ENTRANCE INTO THE SITE

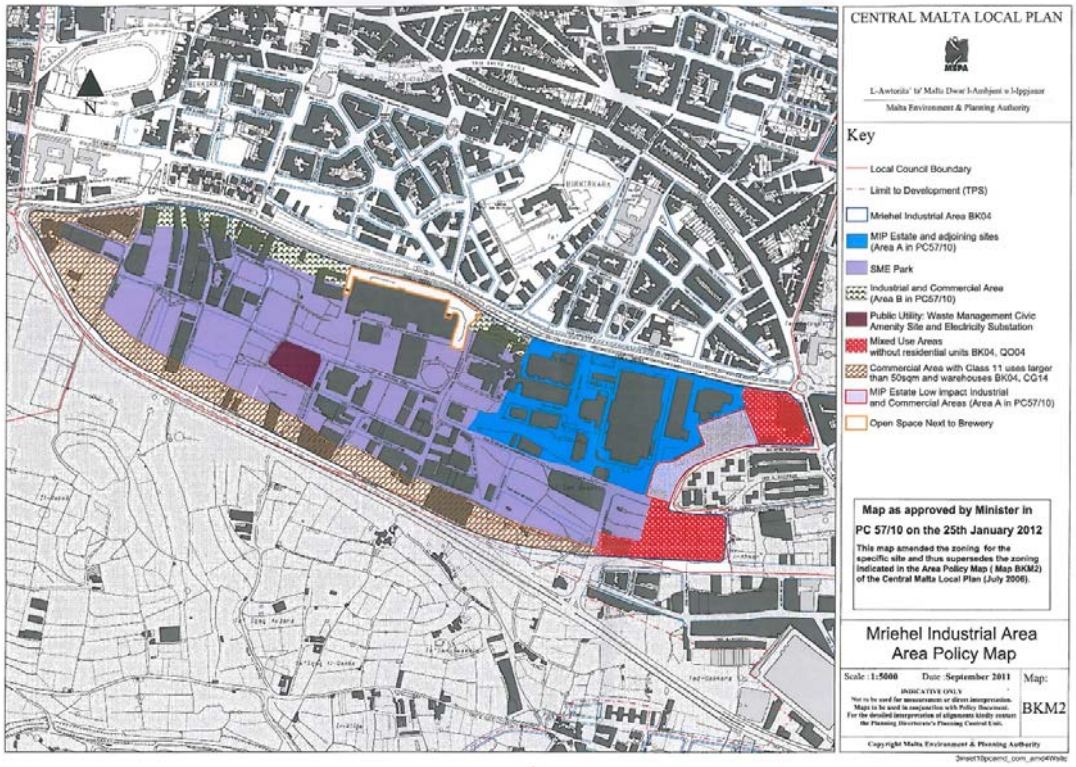


PLATE 10 – MAP BKM2

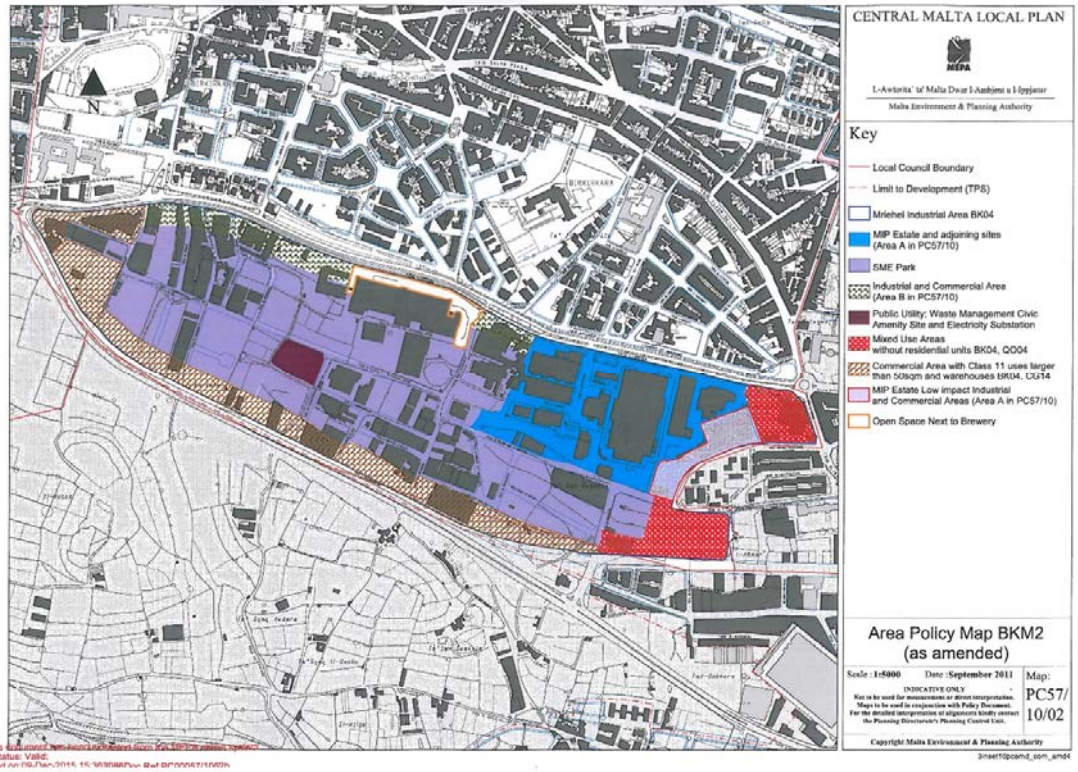
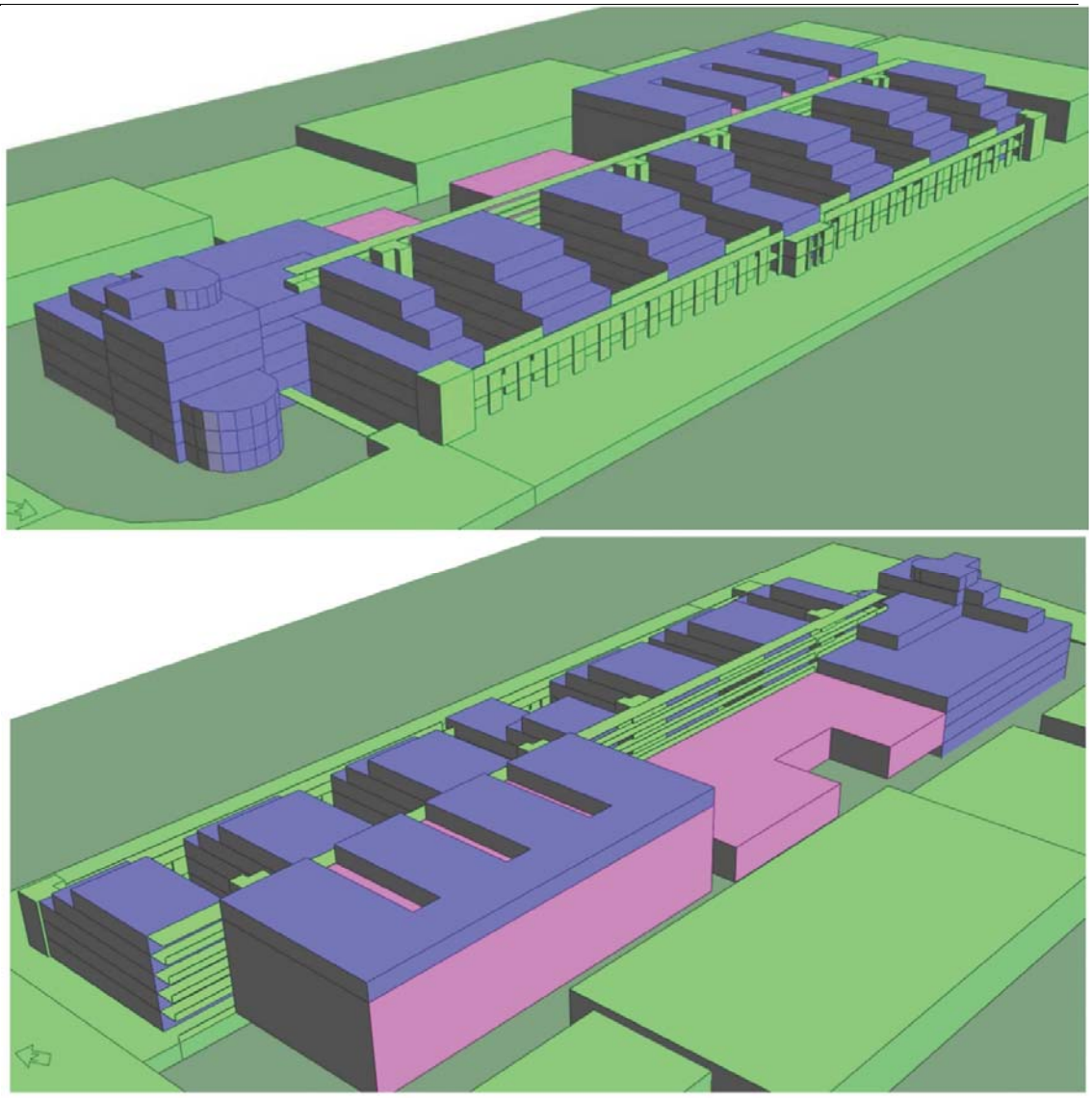


PLATE 11 – MAP PC57/10/02



Screen shots of the Analysis Model geometr

PLATE 12 SCREEN SHOTS OF ANALYSIS MODEL GEOMETRY

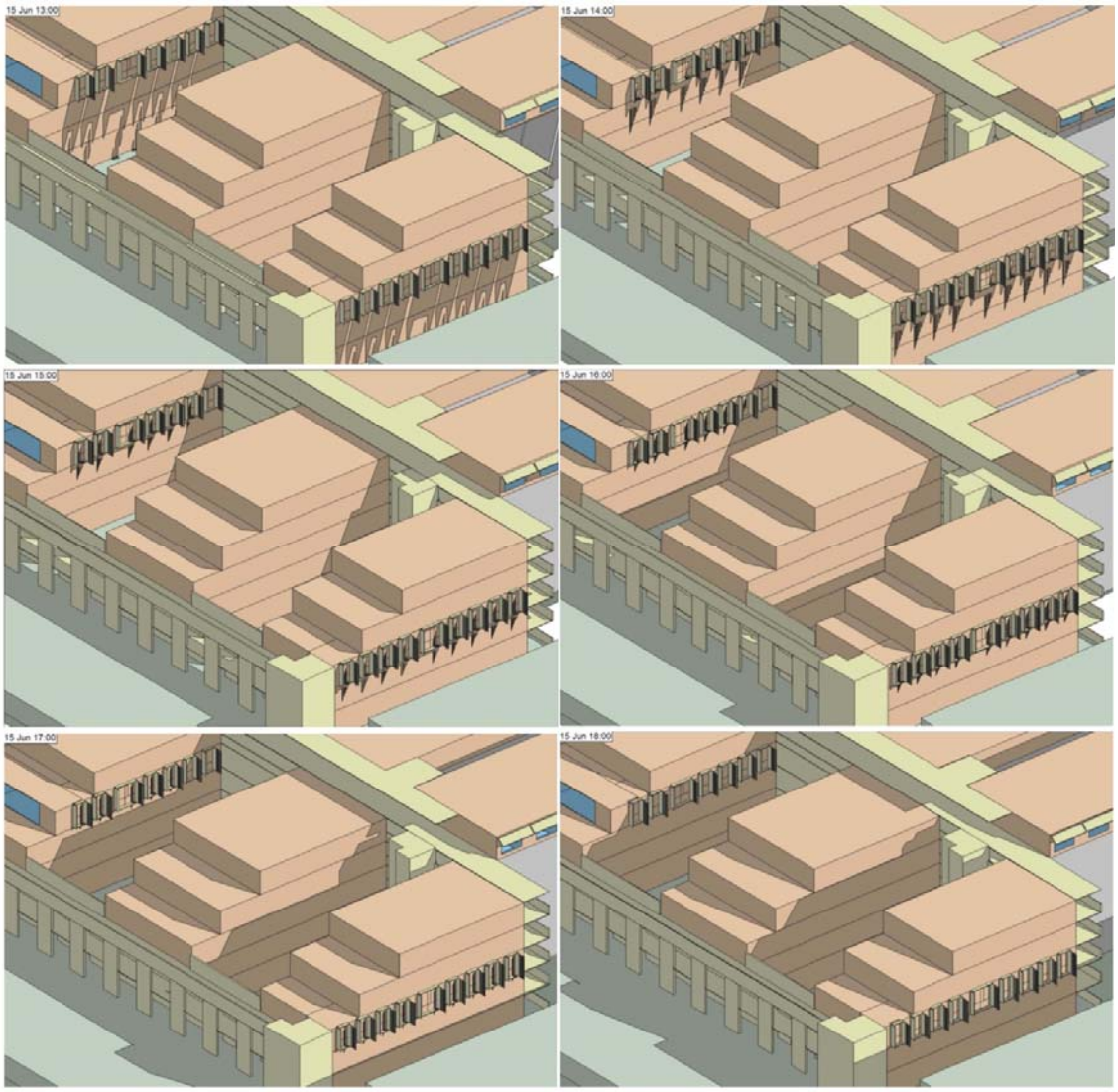


PLATE 13 – SHOTS OF SUN SHADING STUDIES (COMPUTER MODEL)

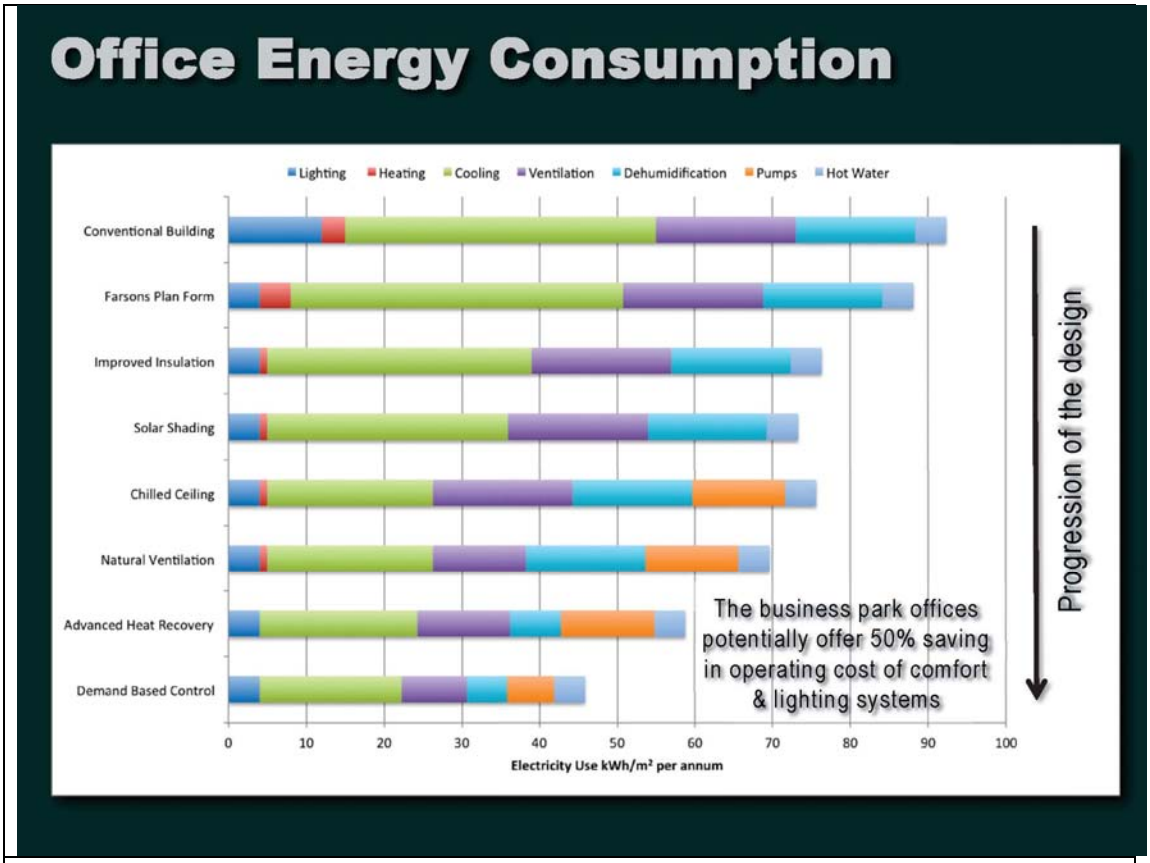


PLATE 14 – ELEMENTS CONTRIBUTING TO ENERGY SAVINGS

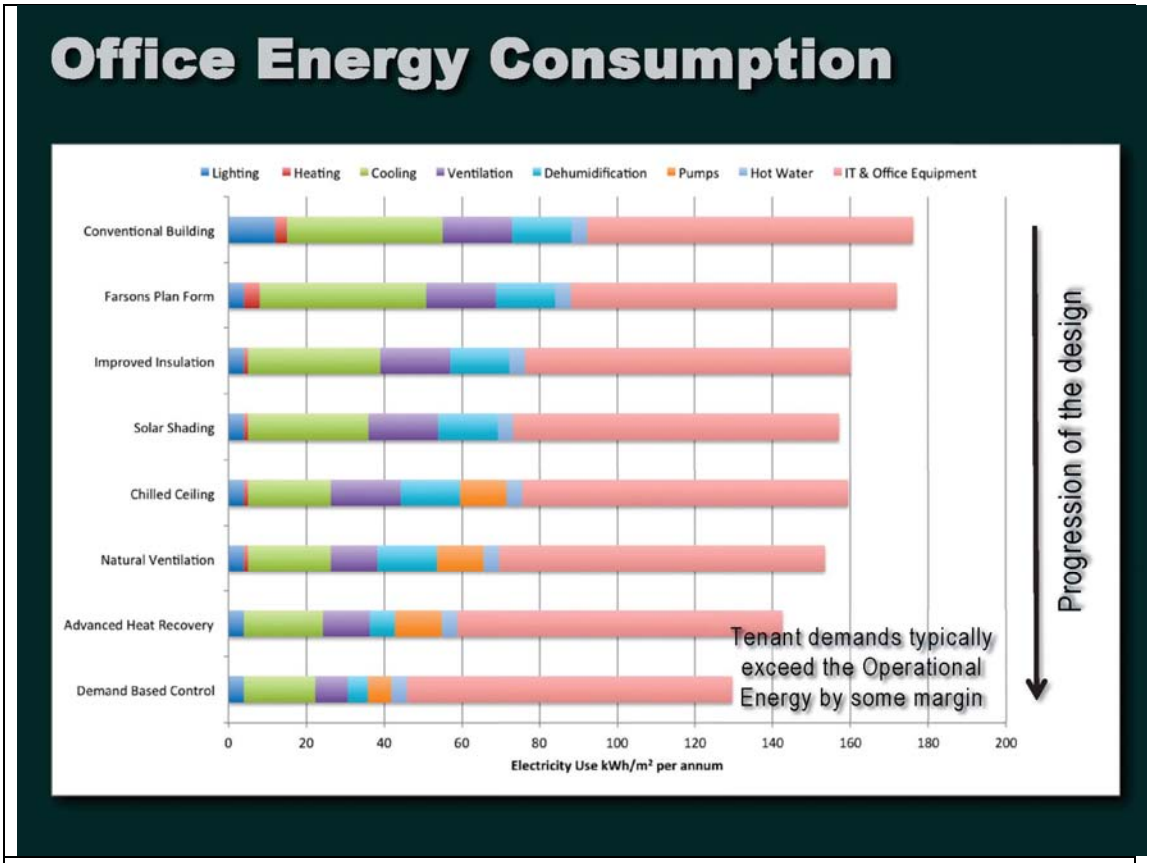
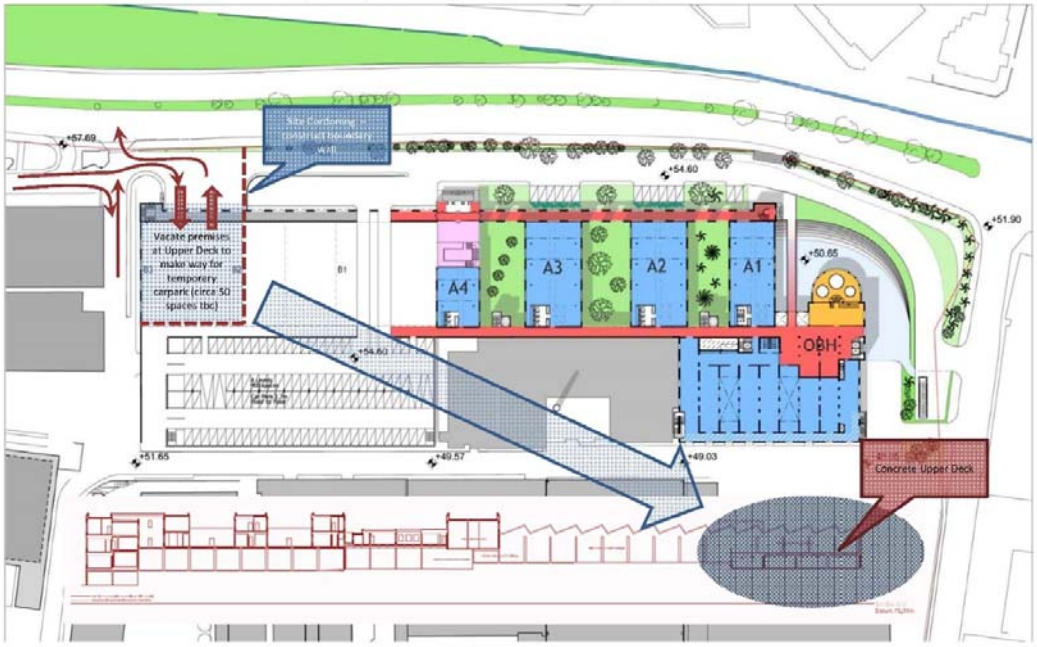


PLATE 15 – ADDING THE IT & EQUIPMENT ENERGY REQUIREMENT

1 – Create Alternative Temporary Parking for Farsons Employees

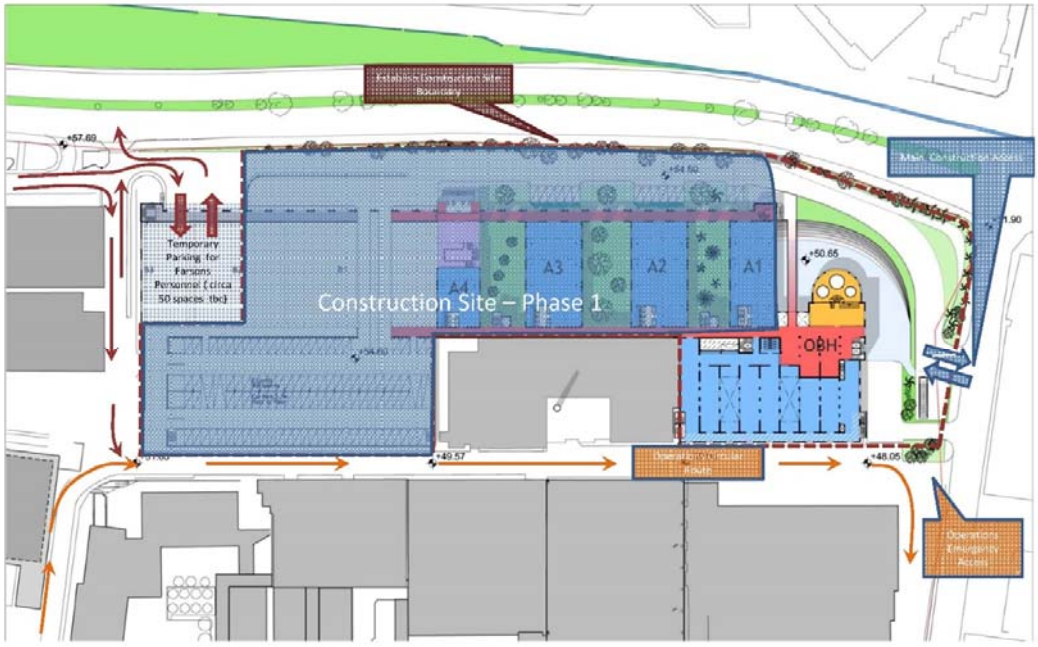


Phase 1

a. Temporary parking for Farsons' personnel proposed for the upper deck in the westernmost warehouses.
b. Links and turning circles still to be worked out and confirmed.

PLATE 16 – CONSTRUCTION PHASING STEP 1

2 – Phase 1: Cordon off Construction Site & Access



Phase 1

a. Construction Traffic and Operations Traffic are physically separated & independent, each with their own controlled access.
b. Approach to Temporary parking for Farsons personnel from Farsons Direct.

PLATE 17 –CONSTRUCTION PHASING STEP 2

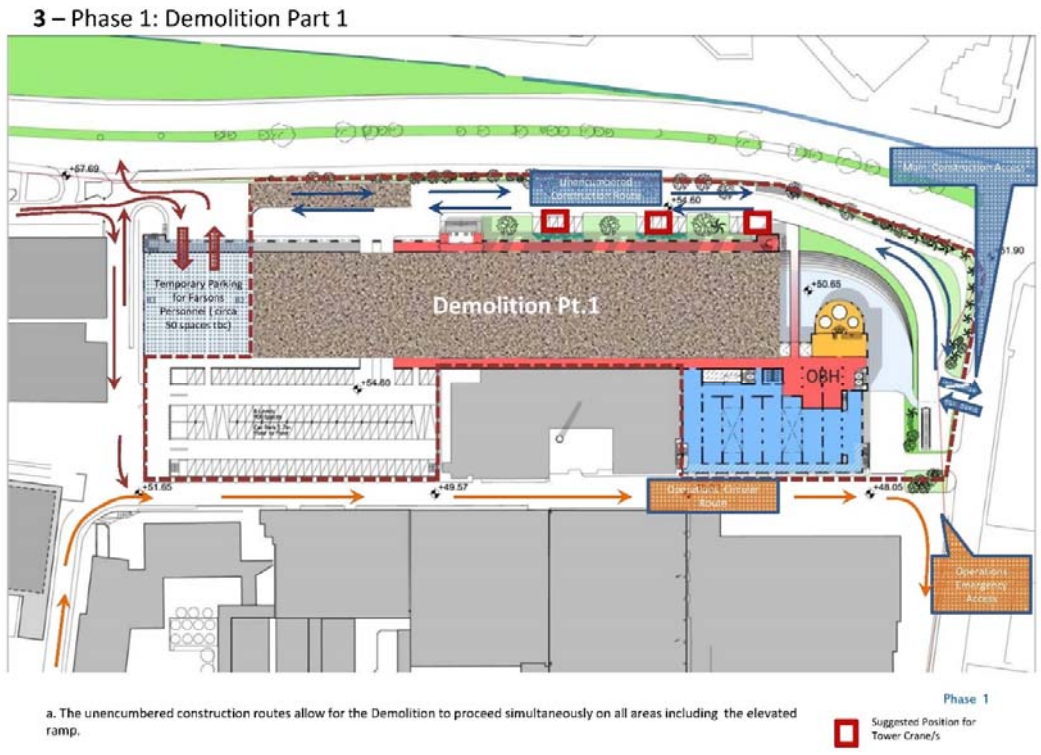
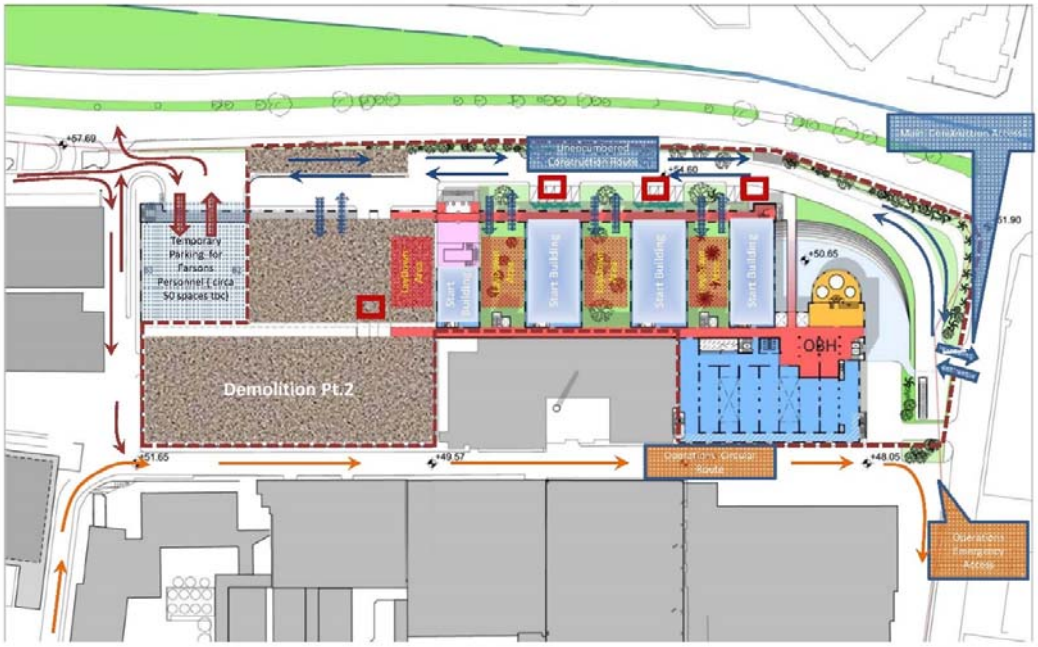


PLATE 18 – CONSTRUCTION PHASING STEP 3

4 – Phase 1: Demolition Part 2 & Construction of A1, A2, A3 & A4



a. Laydown areas have been strategically sited within the garden spaces and can be specifically allocated to each Block .
b. In and Out accesses through the retained portico can likewise be attributed to each area undergoing construction.
c. Verifications as to the width, height and level of each of these accesses still needs to be conducted.

Phase 1

Suggested Position for Tower Crane/s

PLATE 19 – CONSTRUCTION PHASING STEP 4

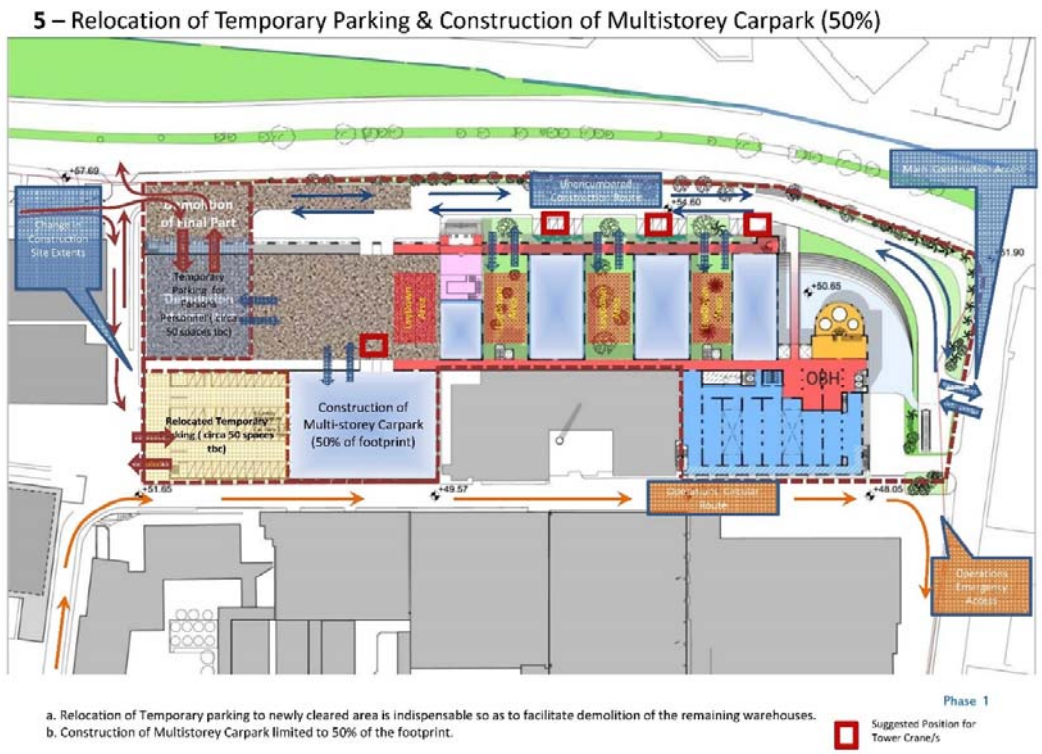
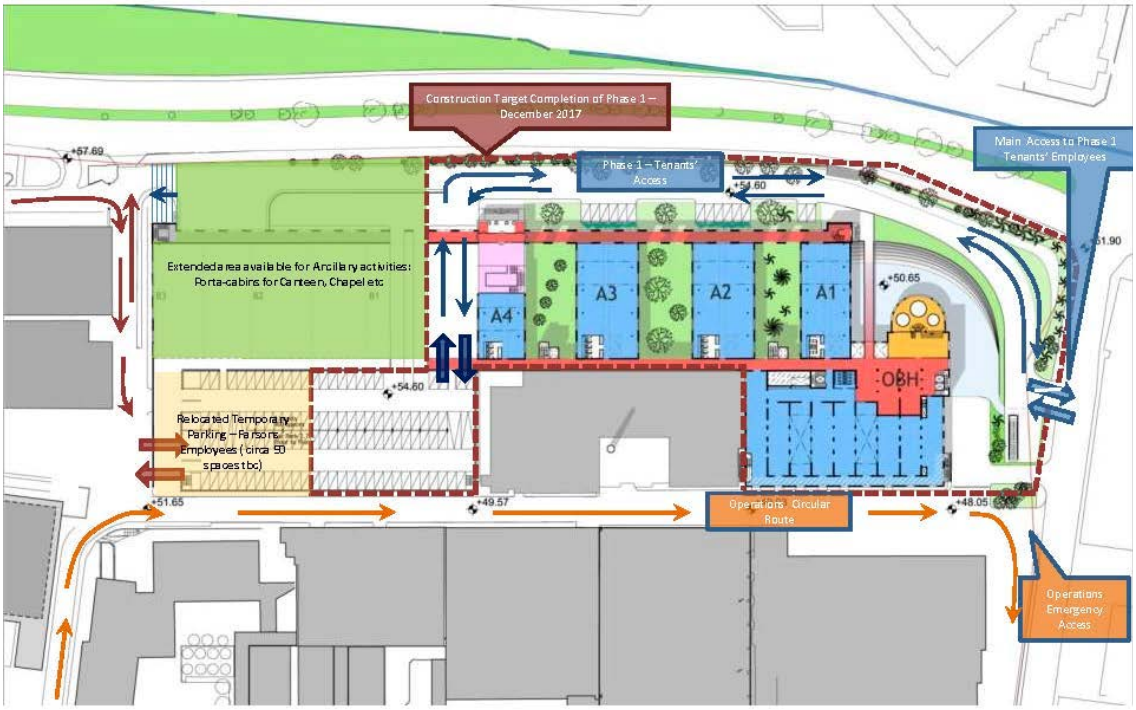


PLATE 20 – CONSTRUCTION PHASING STEP 5

7 – Completion of Construction of Phase 1: Dec 2017



Phase 1

a. Completion of Phase 1 earmarked for December 2017 is inclusive of 50% carparking.
b. Separate access and circulation for tenants' employees. No link possible with internal road structure at Farsons until start of Phase 2.

PLATE 21 – CONSTRUCTION PHASING STEP 6

PLATE 22 – ARCADE MODULE ORGANISING THE LAYOUT

PLATE 23 – ARCADE MODULE IN DETAIL

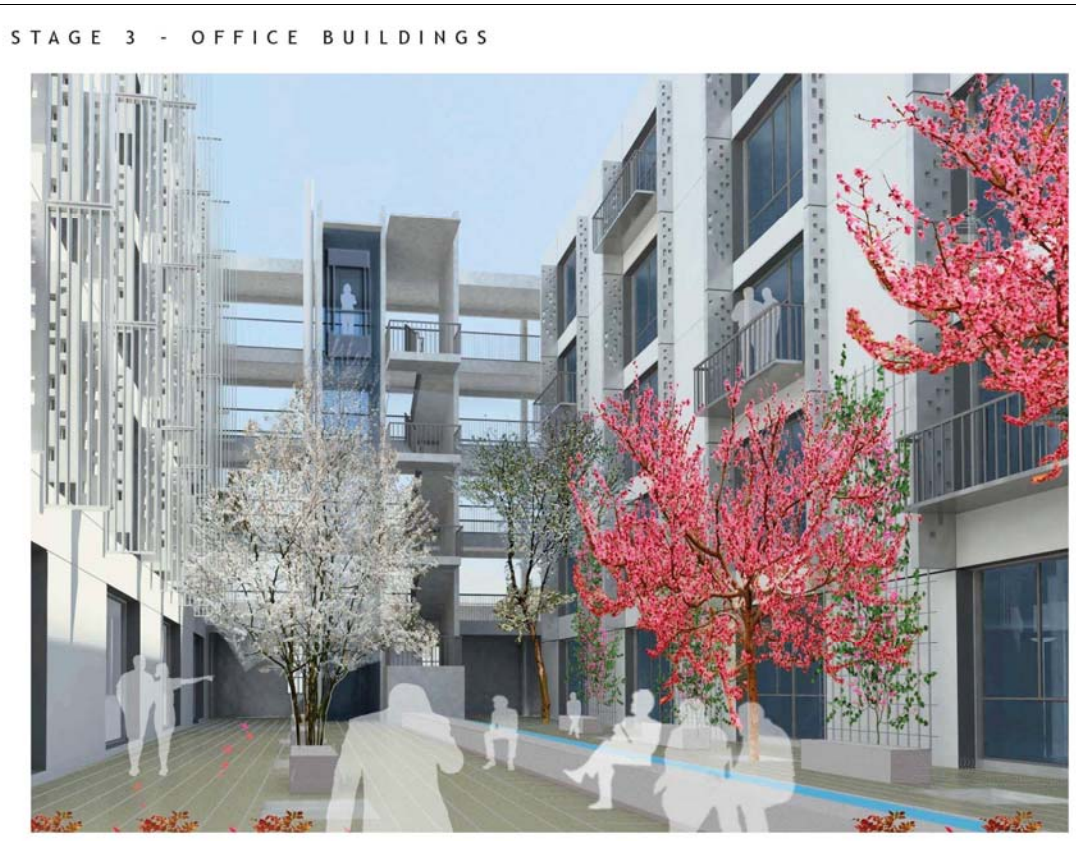


PLATE 24 – ARTIST'S VIEW OF GARDEN

PLATE 25 – TOP VIEW OF GARDENS

PLATE 26 – FINS ON WEST ELEVATION

PLATE 27 – FINS ON EAST ELEVATION

PLATE 28 – TOP VIEW BLOCK A1