Microsoft Ireland

DUB14-15

SD21/0203
Request for Further Information

Issue 1 | P01

Job number 279225-00

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Document verification

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Contents

A request for ADDITIONAL INFORMATION (AI) has been issued by South Dublin County Council in relation to planning application SD21A/0203 dated 15th Sept. 2021 and information within this document is provided in response to the various aspects of the AI notification.

The additional information requests are referenced below in Italics. This document should be read together with other reports and drawings submitted by other parties in responses to the Additional Information request.

As requested, we confirm that we have met with Ronan Toft & Brian Harkin of South Dublin County Council Water Services Department, where we outlined our response to the Further Information request in order to outline our design approach to the surface water drainage design and how we have incorporated additional SuDS and Green Infrastructure features throughout the site and both were in broad agreement with our design approach.

1 Request No. 1.1

The applicant is requested to submit a surface water drainage catchment drawing showing what areas are served by all proposed and existing attenuation and rainwater harvesting facilities.

The drawing shall show attenuation and rainwater harvesting volumes for each system as well as the flow control device locations and corresponding maximum discharge rates.

No attenuation system shall be located under a proposed building and must be adequately distanced away from same so that building foundations are not adversely affected.

Proposals should seek natural solutions and not the heavily engineered solutions proposed.

2 Response No. 1.1

Refer to the attached Surface Water Drainage Catchment Drawing *DUB 14-15_C-D-07* which illustrates the following information for the proposed Dub 14-15 Development:

- Surface Finishes
- Surface Water Drainage Catchment.
- Rainwater Harvesting Drainage Catchment.
- Extent of Green Roofs
- Extent of Roads Draining to Swales.
- Location and Volumes of Attenuation & Rainwater Harvesting Features
- Location & Capacity of the Flow Control Device (1 No.)

Refer to the attached Existing Surface Water & Rainwater Harvesting Catchment Drawing *DUB 14-15_C-D-014 for the DUB 9 &10 and DUB 12 & 13 buildings* which illustrates the following information:

- Surface Water Drainage Catchment.
- Rainwater Harvesting Drainage Catchment.
- Location and Volumes of Attenuation & Rainwater Harvesting Features
- Location & Capacity of the Flow Control Devices

We confirm that all proposed attenuation features are not located under any buildings or within any Building foundation zone.

We can confirm that we have designed the surface water drainage systems to incorporate the following Green Infrastructure features as follows:

- Minimise the extent or impermeable area
- Use of roadside swales
- Rainwater Harvesting
- Surface Water attenuation
- Use of permeable paving within carpark areas
- Grasscrete access roads where appropriate
- Green Roof Area's
    - Central Admin Building
    - DUB 14 & 15 Data Centre Admin Roof Area
- Water Treatment Plant, Water Storage Tanks, WTP Generator have now been located underground.
-

3 Request No. 1.2

The applicant is requested to submit a report showing a breakdown of all surface area types, surface areas (in m2) including corresponding surface run off coefficients for all drainage catchments.

The report shall also include greenfield discharge rate (Qbar) calculations. The applicant shall ensure that the maximum discharge rate from each catchment does not exceed Qbar rural for all storm events. Green infrastructural elements should be demonstrated throughout the site.

4 Response No. 1.2

Refer to the attached Drawing *DUB 14-15_C-D-07* and Table 1 below which illustrates the proposed surface finishes and associated areas that contribute to the surface water networks for the proposed DUB 14-15 development.

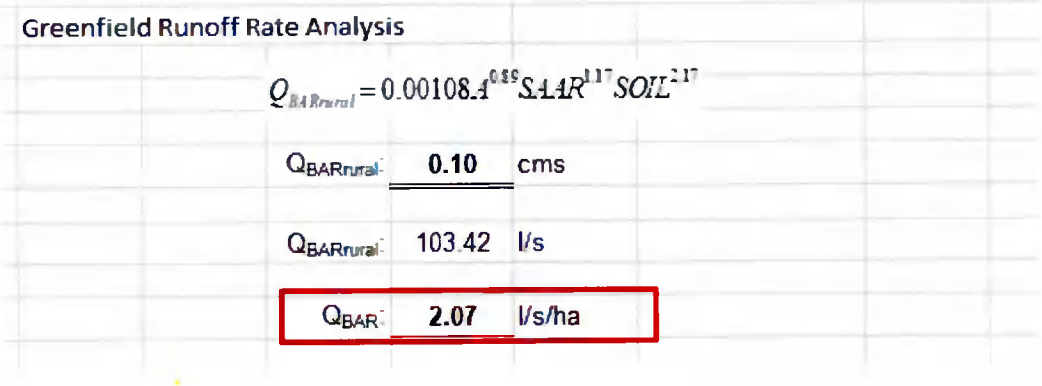
Table 1: DUB14-15 Catchment Details

Proposed Surface Finish	**Surface Water Network**	**Area m²**	**Runoff Factor**
Landscape Area	Infiltrates to Ground	37,555	0%
Roof Area	Rainwater Harvesting Network	28,385	100%
Carpark Permeable Paving Wetlands	Infiltrates to Ground	2,240	100%
Roadway Draining to Swales	Infiltrates to Ground & Overflows to the Surface Water Network. This will be subject to adjustment when the Fuel Filling Set Down Areas are allocated.	9,040	100%
Generator Yards, Loading Bays & Access Roads not draining to Swales	Surface Water Network	31,190	100%
Green Roof	Rainwater Harvesting Network. Area include in the overall roof area	2,330	100%
Total Site Contributing Area to the Proposed Surface Water Drainage Networks		108,410 (10.84 Ha)	100%

As noted in Chapter 6 of the Greater Dublin Strategic Drainage Study the following runoff factors have been used in the drainage design

- *Roofs, Roads and Hardstanding areas – 100%*
- Landscaping Areas - 0%
- Permeable Paving & Green Roofs – 100%

We have calculated the greenfield discharge rate as follows and have used a soil classification factor of 2. This results in an allowable discharge rate of 2.07L/Sec. The previously permitted discharge rate was set at 2.0L/Sec and we have used this figure instead of the marginally higher rate of 2.07L/Sec/Ha.



The overall discharge rate for the proposed DUB 14-15 10.84Ha catchment will have an overall discharge rate of 21.60L/Sec.

It should be noted that even though portions of the proposed road network will discharge to roadside swales we have accounted for 100% runoff when sizing the attenuation facilities, which is in line with the GDSDS design guide.

We can confirm that we have not included for growth curves for the higher rainfall events and have retained the 2.0L/Sec/Ha discharge rate for rainfall events up to and including the 100yr return period.

As illustrated on Drawing No. DUB14-15_C-D-03 & DUB 14-15_C-D-04 we have incorporated the following green infrastructure features into the design for DUB 14-15 as listed below.

- Rainwater Harvesting & Underground Attenuation
- Roadside Swales
- Green Roofs
- Water Treatment Plant is now located underground.
- Permeable & Grasscrete Paving

5 Request No. 1.3

The proposed location of the attenuation system to the north underneath process water storage tanks is not acceptable. This system shall be relocated so that it is a minimum distance of 3m away from the proposed water treatment facility and 5m from any building. Again, Green Infrastructural elements should be demonstrated throughout the site

6 Response No. 1.3

We can confirm that we have relocated the proposed surface water attenuation system at the Water Treatment Plant so that it is outside the zone of influence for the Process Water Storage Tanks.

We can confirm that all attenuation features are not located under or within 5m of any buildings.

Refer to the attached Drawing *DUB14-15_C_D-03 & DUB14-15_C-D-04* which illustrates the locations of all attenuation features.

7 Request No. 1.4

The applicant is requested to investigate if the proposed concrete attenuation tank to the west can be changed to a modular underground storage system such as an arch type system or similar. These systems offer more in terms of interception storage volumes and also are easier to maintain.

Concrete attenuation structures are only acceptable as a last resort. Again, Green Infrastructural elements should be demonstrated throughout the site and underground attenuation should only be sought where other natural solutions can be provided. The Planning Authority notes that there are substantial lands that could be used for natural attenuation areas above ground; these should be investigated, and revised proposals submitted

8 Response No. 1.4

As requested, we have redesigned the proposed surface water attenuation system to utilise the StormTech modular arch type system for all three attenuation locations.

In relation to utilising the open lands north east of the Water Treatment Building we confirm we have redesigned this area to now locate the buildings, tanks and generator underground in a basement and return the area to the previously permitted grassed meadow area, for details refer to the landscape drawings.

Notwithstanding the additional green infrastructure incorporated into the design which has been detailed above, developments of this nature and scale will require significant surface

water attenuation volumes and the proposed natural attenuation features are required to be supplemented by traditional underground attenuation features.

We have examined using the open space for surface water attenuation, however depth of the proposed surface water drainage network of circa 3-4m would result in the infiltration zone being within the ground water layer which means this is not a possible surface water disposal option.

In addition, the use of underground rainwater harvesting tanks in place of open ponds is preferred due to the requirement for clean water for use by the cooling process, which significantly reduces the use of potable water.

Refer to the attached Drawing *DUB14-15_C_D-03 & DUB14-15_C-D-04* which illustrates the revised surface water drainage collection system.

9 Request No. 1.5

The applicant has proposed to relocate attenuation systems and rainwater harvesting systems so that they are underneath the proposed gas compound to the east. The applicant is requested to demonstrate how these attenuation and rainwater harvesting systems will be accessed for maintenance purposes and demonstrate how these systems will not be adversely affected by loading from compound structures above.

Again points 3 and 4 above are relevant. (6) The applicant is requested to submit an updated SuDS (Sustainable Drainage Systems) layout plan for the development.

SuDS shall be maximised across the site and shall include features such as but not limited to: Swales, detention basins, tree pits, filter drains, channel rills, permeable pavement, living walls and green roofs. The applicant shall submit details of all such SuDS features.

10 Response No. 1.5

In order to construct the proposed gas generation, compound it is proposed to redesign the layout and orientation of the existing permitted DUB 9/10 & DUB 12/13 surface water and rainwater harvesting tanks to better align all four tanks with the proposed gas compound structure. The primary structure above the tanks will consist of a reinforced concrete transfer slab, which will ensure that the loading is evenly distributed and takes account of the StormTech attenuation system underneath.

We confirm the proposed volume of the new surface water attenuation & rainwater harvesting tanks will match the existing tanks which form part of previously permitted development

Access manholes will be provided at both upstream and downstream of the proposed StormTech attenuation systems to provide access for routine maintenance which will be required for desilting the attenuation system.

All access and maintenance operations will be undertaken in accordance with Microsoft's current Standard Operating Procedures for these attenuation facilities which are currently in operation on the existing campus.

The surface water from the compound will be collected via a network of drainage channels prior to discharging to the realigned tanks. All surface water will be routed through the Hydrocarbon Interceptor prior to discharging to the proposed surface water network.

We can confirm that we have incorporated additional SuDS features throughout the site as outlined below and these are detailed on Drawings *DUB14-15_C_D-03 & DUB14-15_C-D-04.*

- Minimise the extent or impermeable area.
- Moving the WTP underground
- Use of roadside swales
- Permeable Paving for Parking areas
- Rainwater Harvesting
- Surface Water attenuation
- Green Roofs
- Replacement of the concrete attenuation tanks with a StormTech Arch. system.

As can be seen from the proposed planning drawings we have positioning the proposed Gas Networks Ireland Above Ground Installation (AGI) further south compared to the previous permitted development and this is due to the Gas Networks Ireland's requirements of set-back distances from existing utilities on site.

11 Request No. 1.6

The applicant is requested to submit an updated SuDS (Sustainable Drainage Systems) layout plan for the development. SuDS shall be maximised across the site and shall include features such as but not limited to: Swales, detention basins, tree pits, filter drains, channel rills, permeable pavement, living walls and green roofs. The applicant shall submit details of all such SuDS features.

12 Response No. 1.6

We confirm that we have re-designed the overall surface water drainage collection & disposal infrastructure and have maximised the SuDS features where possible which include the following:

- Minimise the extent or impermeable area.
- Moving the WTP underground
- Use of roadside swales
- Permeable Paving for Parking areas
- Rainwater Harvesting
- Surface Water attenuation
- Green Roofs
- Replacement of the concrete attenuation tanks with a StormTech Arch. system.

Refer to Drawings *DUB14-15_C_D-03 & DUB14-15_C-D-04*, which illustrate the SuDS design features which have been incorporated into the surface water drainage design.

13 Request No. 1.7

All proposed parking bays shall be constructed using a porous surface material. A revised layout drawing shall include this information.

14 Response No. 1.7

We can confirm that all parking bays currently include permeable paving, and these are noted on the existing planning drawings and illustrated on the attached Drawings *DUB 14-15_C-D-07.*

15 Request No. 1.8

No industrial water or potable water supplied from the public watermains network shall enter the storm water network. Only clean untreated and uncontaminated rainwater shall enter the stormwater network. All treated water and process cooling water shall be discharge to the public wastewater drainage network

16 Response No. 1.8

We confirm that all industrial water being discharged from the development will discharge to the exiting Irish Water sanitary sewer located to the north west corner of the site. In addition, we can confirm that no potable water from the public watermains will be discharged to the surface water drainage network.

We can confirm that the applicant has submitted a pre-connection agreement to Irish Water on 11th July 2020(CDS No. 20004546) and submitted additional information requested by Irish Water on 24th September 2021 which is currently being reviewed by Irish Water.

17 Request No. 1.9

All design of overground fuel storage tanks shall comply with the requirements of the Greater Dublin Regional Code of Practice for Drainage Works Section 17-GUIDELINES FOR THE BUNDING OF OVERGROUND OIL STORAGE TANKS

18 Response No. 1.9

All fuel storage tanks are double lined tanks which provide both the primary and secondary protection in the event of a leak.

The tanks are located within an impermeable concrete yard which is drained via a Class 1 Full retention Interceptor which provides the tertiary containment within the interceptor.

In addition to the above there is an Isolation Valve located at the manhole downstream of the primary attenuation tank, which will be automatically closed in the event of a fire, thus retaining any potential contaminated surface within the attenuation facility.

19 Request No. 1.10

Conditions 12 and 13 of the previously granted planning permission Ref No. SD20A/0283 shall continue to apply

20 Response No. 1.10

We confirm we have reviewed planning conditions 12 & 13 of the previously granted development *SD20A/0283, which relate to Water Supply / Foul Drainage and the mitigation measures for the protection of the Griffeen River.*

We confirm that we are in agreement with the conditions and a detailed planning compliance response will be submitted on receipt of a grant of planning permission which will clearly demonstrate compliance with these and all planning conditions.

21 Request No. 2

The applicant is requested to engage with Irish Water by submitting a Pre Connection Enquiry (PCE) to assess feasibility of connection to the public water/waste water infrastructure.

The outcome of the PCE is to be submitted to the Planning Authority as a response to the request for further information.

22 Response No. 2

We can confirm that the applicant has submitted a pre-connection agreement to Irish Water on 11th July 2020(CDS No. 20004546) and submitted additional information requested by Irish Water on 24th September 2021 which is currently being reviewed by Irish Water.

Once the Irish Water contract has been agreed we will submit a copy to South Dublin County Council.

23 Request No. 3

The applicant is requested to reconsider the current plan, to investigate the inclusion of other biodiversity compensatory measures such as living walls/green walls, additional green roof features on administration buildings (or other roofs free of plant structures) etc in line with green infrastructure requirements and policies under Chapter 8 of the CDP.

Sufficient and appropriate biodiversity compensatory measures on other areas of the applicant's overall property holding at Grange Castle could also be considered.

The applicant is requested to submit a revised site layout which adequately address the loss of landscape and biodiversity features.

24 Response No. 3

The landscape masterplan submitted with the planning amendment application included a number of biodiversity proposals along the north, west and southern boundaries. Nevertheless, these plans have been reviewed and an updated landscape plan submitted with this further information (Refer to Brady Shipman Martin plan 6816-303) request which includes additional biodiversity measures. These measures include a living wall along the east facade of DUB 14 within the employee social space. The wall in this location will have the advantage in that it will tie into the proposed biodiversity measures for this space which include a meadow and sensory garden. It is considered that it will also be visually appealing and of more value in this location than adjoining the CAB Building. This wall will comprise a fabricated metal structure set within a planter. Plants will be selected that support and encourage insect and birdlife habitats. There is also the opportunity to grow edible crops for use by employees

Figure 1: Detail of Living Wall Panel

A living wall has also been proposed along the north and west façade of the Gas Generator to the south of the site.

The water treatment plant and tanks to the north have been placed below ground and it is proposed to construct a living wall along the perimeter fence of the flue stack and access stairs. This wall will be planted with climbers that encourage pollinators and in addition to the increased meadow area now proposed as a result of the water treatment plant and gas generator being located below ground, will enhance other biodioversity proposals for this area with the existing retained hedgerow and proposed shallow wet grassland habitat to the north.

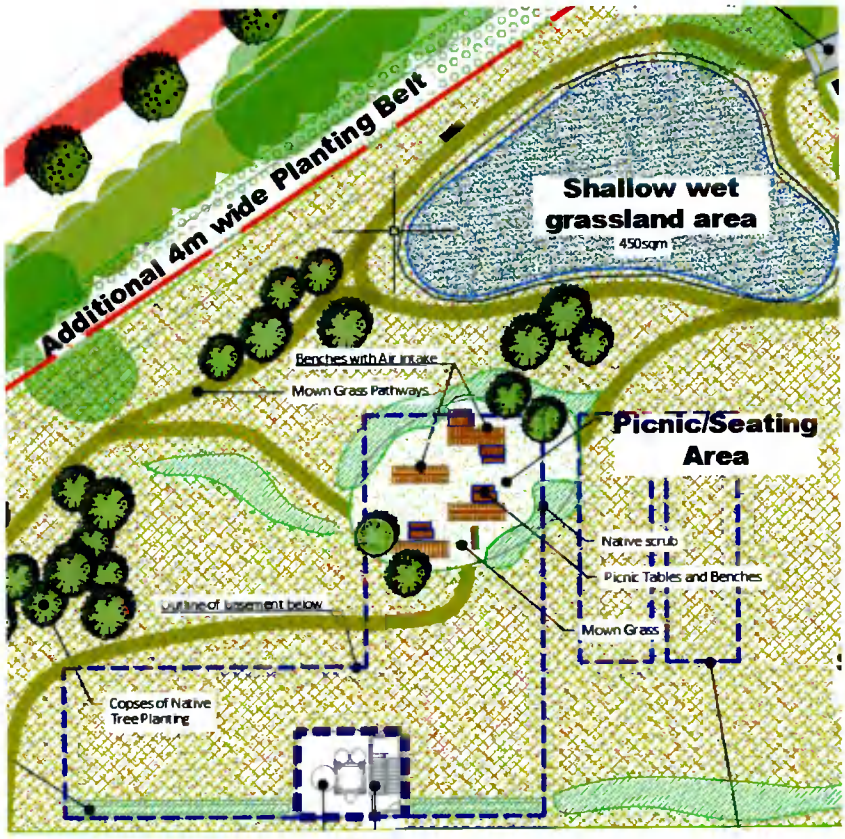


Figure 2: Living Wall Panel to East and North Side of Tanks

The provision of enhanced biodiversity measures is reflected in the landscape approach taken on the subject site which integrates with an existing ecological corridor wrapping around the campus boundary and tying into the existing planting implemented within the overall campus. This strategy is illustrated in Brady Shipman Martin's plan 6816-304 and 6816-305. These plans illustrate the green network extending along the campus boundaries and include the Griffeen River Corridor and existing retained hedgerows to the north of the campus. Within the campus grounds the meadow grassland adjoins the woodland perimeters and provides a varied ecological habitat for birds and insects.

Within the subject site the loss of biodiversity is compensated by the following measures:

- The planting of circa 0.63 hectares of woodland to the south boundary which will replace the hedgerows lost within the campus prior to commencement of any campus development
- Additional woodland planting to augment the existing hedgerows along the Griffeen River (circa 107Lm x 4m wide).

- Within the site, circa 12.8 hectares of meadow grassland is proposed. The meadow grassland will extend around the perimeters of DUB 14 and DUB 15 to connect the internal campus spaces to the perimeter. The revised layout includes additional trees within the car park (23No) and on the south side of DUB 14 and the west side of DUB 15. (52No)
- A living wall is also proposed on the east side of DUB 14 within the employee garden.
- A living wall is proposed along the north and west side of the Gas Generator Plant and around the Flue Stack and Access Staircase within the northern portion of the site.
- An employee garden/ social space is proposed to the east of DUB 14 measuring 2750sqm. This is a space for employees to gather, grow edible crops, and relax within the sensory garden. It is also designed to connect to the meadow area to the north with walks provided using mown grass paths. This additional space was not included within the permitted development (Reference SD20A/0283). It is illustrated in the cgi – Plate 2
- An ecological corridor is provided between DUB 14 and DUB 15 which proposes a meadow along the verges and trees located in planter boxes owing to multiple services in this area. The planters will be planted with trees such as Amelanchier underplanted with pollinating perennials such as lavender, salvia, verbena.
- To the north of the site the proposal to relocate the water treatment plant and generator below ground will provide compensatory habitats by extending the meadow grassland across this open space, achieved by providing a green roof to the structures below ground. The structures that appear above ground such as the air intake units will be integrated into a series of benches and with picnic tables and will form an outdoor social/ amenity space for employees. Areas of scrub will be planted around the perimeter of the space to provide a habitat for birds in addition to providing shelter.

25 Request No. 4.1

The removal of the planting within the parking area is not acceptable and must be addressed through a revised site layout plan.

26 Request No. 4.2

A significant amount of planting is removed from around the perimeter of the DUB 15 building. Although the building has widened by 60m, the removal of trees and landscaping is significant and is not acceptable to the Planning Authority.

The Planning Authority understands the rationale regarding the wider building and associated constraints. However, the applicant is requested to, way of additional information. advise on how the removal of trees will be replaced elsewhere on site.

The applicant is requested to submit revised proposals demonstrating the inclusion of significant Green Infrastructure throughout the development, to be incorporated along with the requirements set out under the biodiversity item included in this overall request for additional information.

27 Response No. 4.1 & 4.2

The removal of tree planting within the car park area was required due to the location of the attenuation tanks which extend over the full extent of the parking area. In order to address this Item a revised site layout plan is proposed to reduce the extent of car parking within this area from the permitted 96 spaces to 62 parking spaces and trees will be planted within planter boxes. These will be planted with native Birch / Rowan and under planted with perennials and shrubs that are included in the All Ireland Pollinator Plan 2021-2025 – Action 5 for Businesses.

Where space allows the northern edge of the car park will be graded over the tanks to provide adequate soil depth for trees. A root barrier will be installed below the mound as protection. A native copse of Hazel will be planted with a meadow understorey.

In respect of tree planting around the perimeter of DUB 15, planting trees within the ground is not feasible given the quantum of services within the verge wide verge. To compensate, trees will be planted within raised planter (8No trees) and the grass verge will be sown with a wildflower meadow mix which will tie into the meadow mixes around the internal campus areas. Trees will also be planted along the south perimeter of DUB 14 (36No trees)also within planters where the wider verge permits more trees.

In additional a significant belt of native woodland is proposed south of DUB 15 along the boundary. The permitted development proposed a linear belt measuring 6-8m wide. However the revised proposal provides a 49m wide woodland (0.6 ha) belt located on an extended mound that provides more visual movement than the linear berm previously permitted under permission SD20A/0283.

28 Request No. 5

In the interests of clarification of what is being proposed the applicant is requested to submit a full schedule clearly detailing all development approved and all proposed amendments and the difference, to include clarity on:

(i) The statutory notices state that the proposed development will comprise of:

- *A 'reduction in overall building footprint (for each approved Data Centre - DUB14 and DUB15) by 48sq.m (from 13,442sq.m to 13,394sq.m)' and*
- *An 'overall decrease in Gross Internal Floor Area (GIFA) of 1,352sq.m in respect of DUB 14 and decrease of 1,453sq.m in respect of DUB 15'*

Both of the above statements appear to be contradictory. It is unclear what is being proposed. This requires clarification and exact floor areas for each structure should be submitted for assessment.

(ii) The statutory notices state that the proposed development will comprise of:

- *Omission of approved E-houses.*

The Planning Authority a number of E-houses throughout the site. It is unclear how many E-houses are proposed to be omitted in this application. Do the E-houses to be omitted relate only to DUB15 or to the entire development? (it is noted that other E-houses have been granted throughout the site).

The number of E-houses to be omitted should be submitted for assessment.

(iii) The statutory notice states that a total gross floor area is 56,566sq.m (previously stated to be 59,766sqm under SD20A/0283), which represents an overall decrease in 3,200sqm. The applicant is requested to submit clarification of the breakdown of approved floor area and proposed floor and demonstrate clearly where the decrease takes place.

29 Response No. 5

Refer to Appendix 1.

30 Request No. 6

(i) This office building presents a high-quality architectural response that in visual terms, positively defines and frames the entrance to the Business Park. This is generally acceptable and the relocation of the structure in an eastward's direction is welcomed, this should allow for greater planting to take place around the Griffeen River.

Revised Landscape Proposals should be submitted addressing this requirement.

(ii) The Planning Authority understands from the documentation submitted that the CAB building is being realigned/relocated to accommodate a 10.5m wide wayleave over the existing 450mm below ground foul sewer and 5m wide wayleave for future utilities running along the inside of the site boundary wall and this is generally acceptable.

However, the Planning Authority remains of the opinion that the boundaries of this site and all lands in close proximity to the remnants of the River Griffeen should significantly planted, screened and greened. The applicant is requested to clearly demonstrate mitigation measures for the 'future utilities' at this location.

31 Response No. 6(i)

The updated landscape masterplan proposes to augment the existing hedgerow by planting a 4m wide native wood belt along the site side of the hedgerow. It will extend for a distance of 45Lm. Species will comprise Birch (*Betula pendula*), Hazel (*Cory*lus avellana), Hawthorn (Crataegus monogyna), Elder (Sambucus niger), Spindleberry (*Euonymus europaeus*). Space for planting to the immediate west of the CAB Building is constrained by the wayleave associated with the existing foul sewer. However, it is proposed to place soil over these areas and form a low mound with a root barrier below to enable trees to be planted.

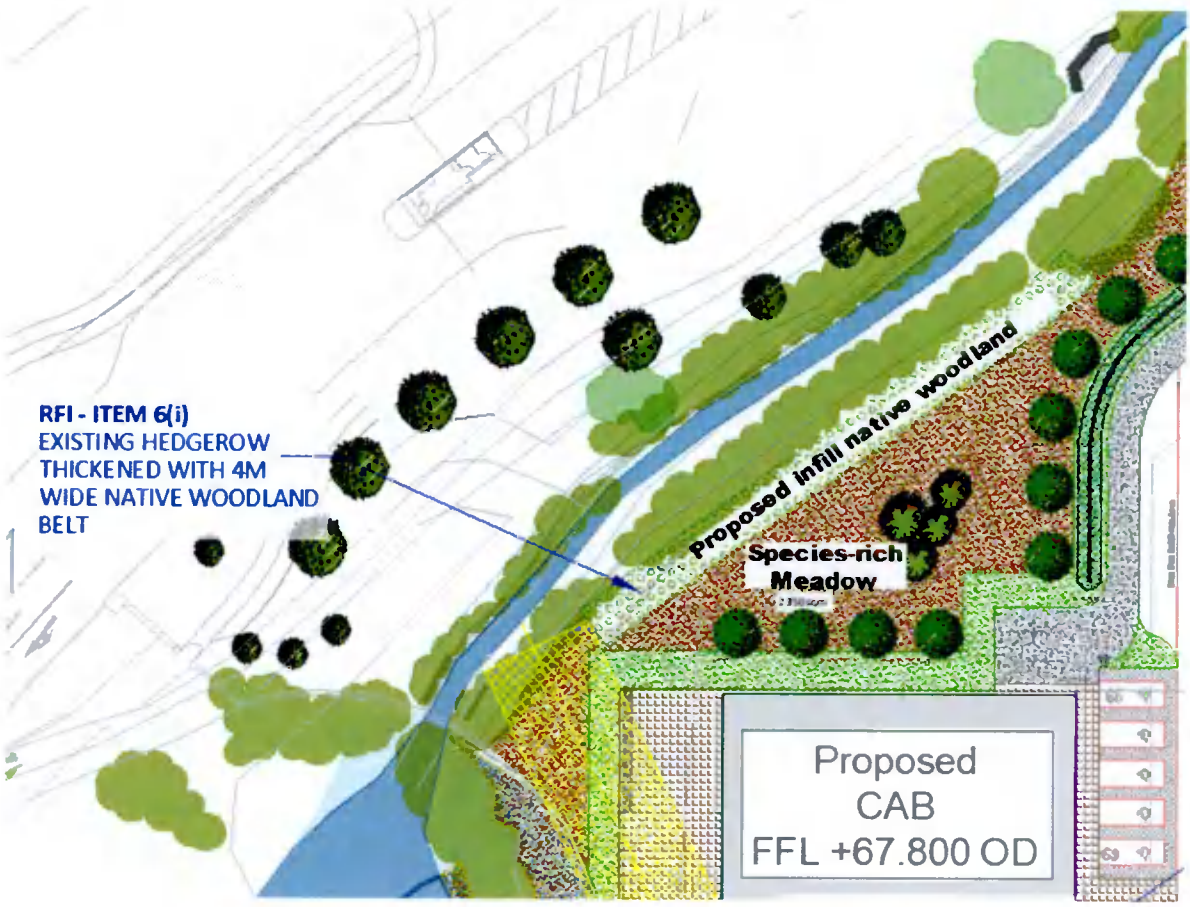


Figure 3 Extract from Site Masterplan

32 Response No. 6(ii)

The provision of a wayleave of 10.5m wide restricts the potential for any tree planting west of the CAB Building. However as the Planning Authority have expressed a preference that the lands along the Griffeen River be planted, it is proposed to plant a line of pine trees on the western edge of the wayleave and install a root barrier. The trees will be planted on a low mound approx. 1.2-1.5m high over the wayleave to provide adequate soil depth.

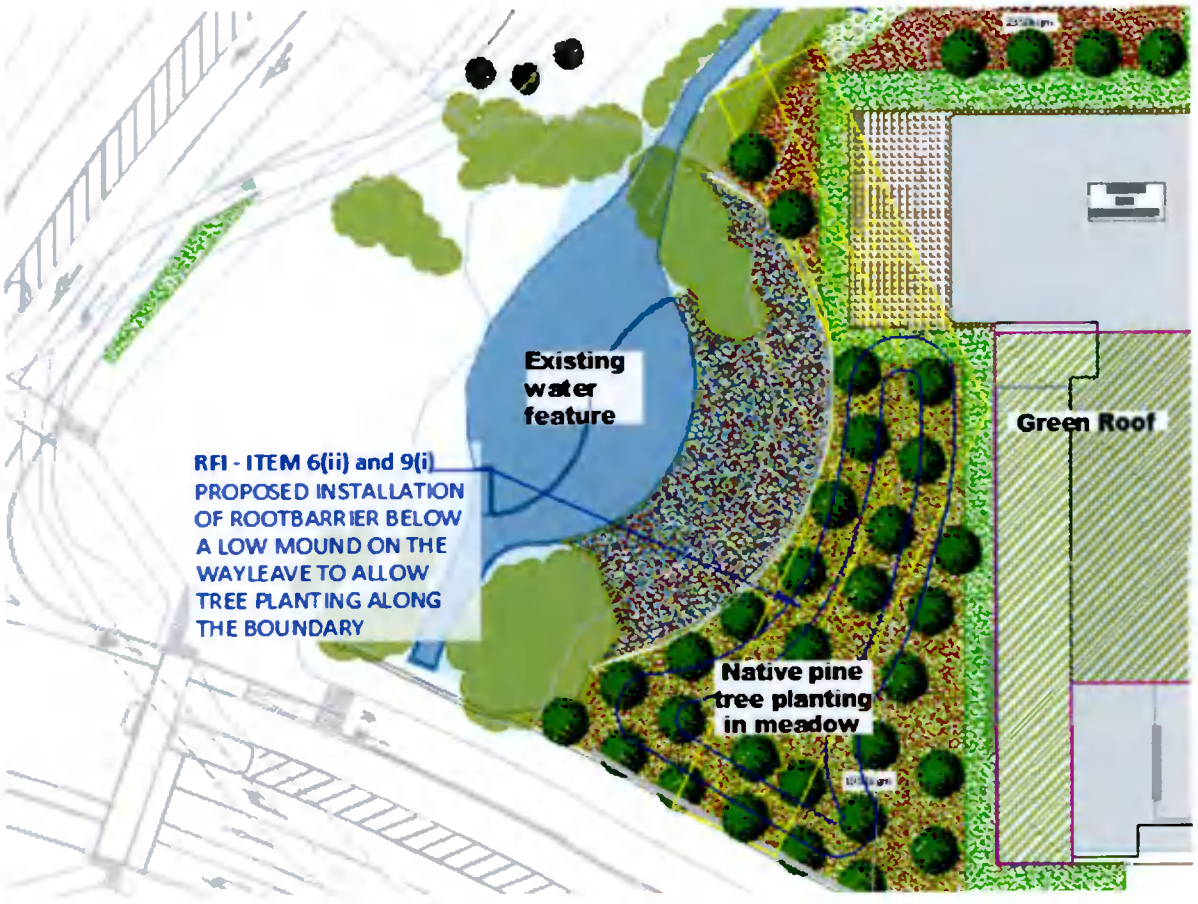


Figure 4 Extract from Site Masterplan west of CAB Building – Tree shown on low mound

33 Request No. 7

With regards to the proposed relocation, modifications to design and expansion of approved Water Treatment Building and associated plant to include, Water Treatment Tanks, 2 sprinkler tanks and relocated approved pump house (contained in the main Water Treatment Plant building) and 1 generator with additional proposed flue stack (height 30.75m) and 1 transformer, the Planning Authority has serious concerns.

These concerns were raised at the Pre-Planning meeting. They encroach upon an area that has significant landscaping possibilities to mitigate the impact of the development on the receiving environment and has natural SUDS solutions capabilities. Their arbitrary location would ensure that landscaping and increasing biodiversity in the area will be challenging and possibly ineffective.

The Planning Authority are not supportive of this change and would request the applicant to seek an alternative location and/or design solutions. The applicant should seek 'natural solutions' to these proposals in line with County Development Plan policy and objectives.

Revised proposals to be submitted.

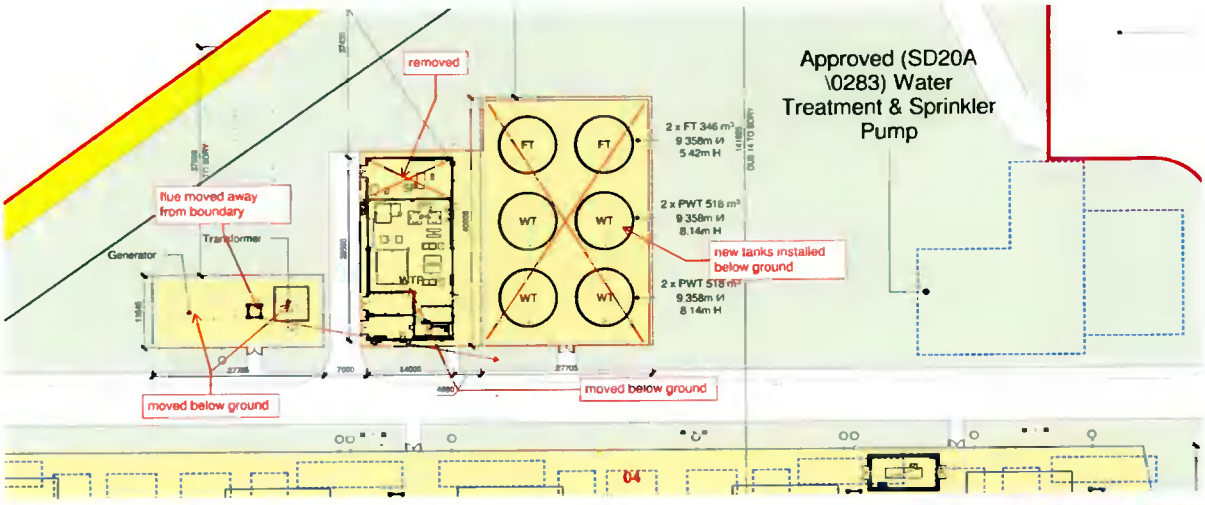
34 Response No. 7

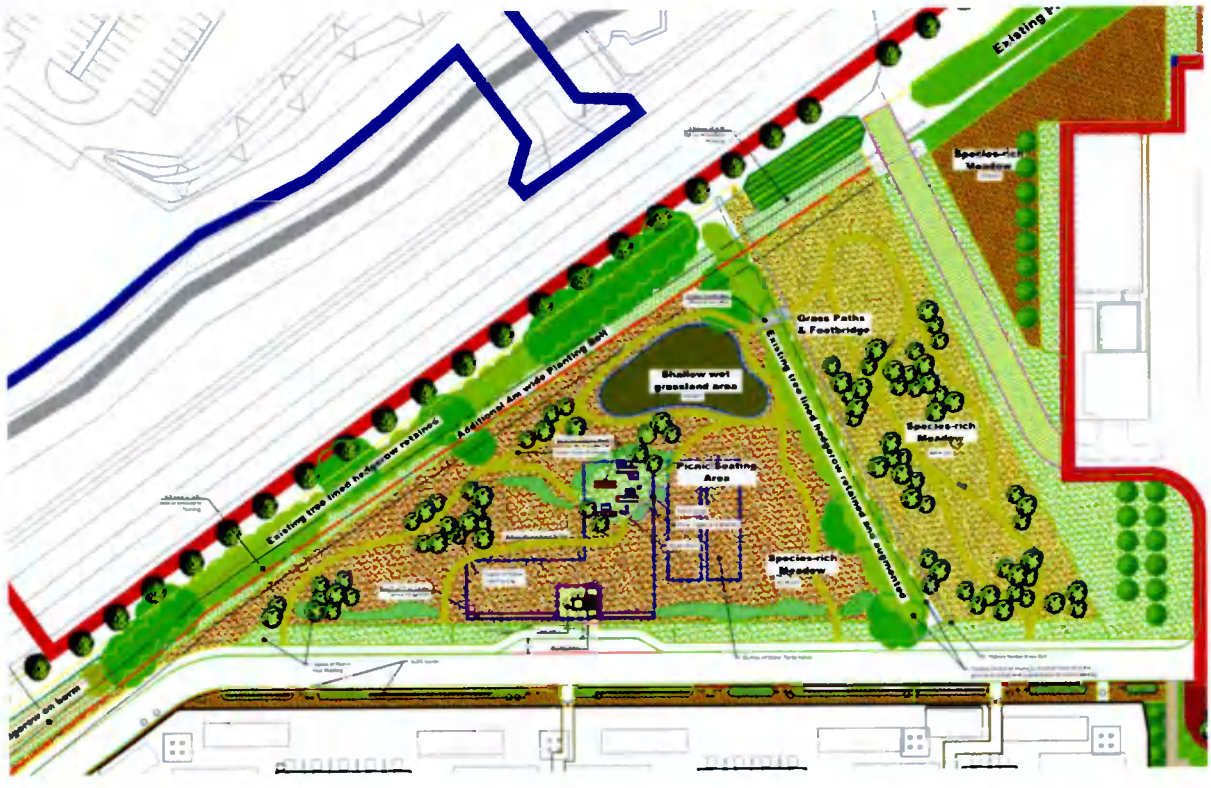
Please refer to updated drawing "A1050 - Proposed Sprinkler Tank and Pump Details".

The Water Treatment Plant has been moved below ground to bring back landscaping at ground level. The following changes have been implemented to respond to Request no. 7:

- Fire pump removed from Water Treatment Plant compound, WTP building footprint reduced by 94 m²
- Fire tanks removed from Water Treatment Plant tank compound
- Above surface water tanks replaced by below ground water tanks, meadow area is now visually free, previously we had 6 cylindric water tanks (2 fire tanks above 5 m tall; 4 water tanks more than 8 m tall)
- Generator and transformer relocated away from the neighbouring boundary and road They are now buried below ground with only minimal ventilation openings at ground level and flues extract.
- Generator flue stack moved further away from the neighbouring boundary road
- The space above the WTP is now used for landscaping with integrated louvres, required to ventilate the rooms below ground. The ventilation system is now integrated into the landscape design as part of picnic benches and planters

- Generator flue stack and ventilation ducts are above ground. They are arranged around a structural support and protected by a fence treated as a "green fence" integrated with planting.
- Access to the building below ground is provided via a main staircase framed by the green fence. An additional mean of escape is provided nearby one of the ventilation benches via a ladder and a hatch at ground level.





35 Request No. 8

(i) The Planning Authority notes the contents of the EIAR. The Planning Authority had assessed the approved development on the basis of the original EIAR. The proposed amendments are not considered to be minor and it is considered that they will have a major impact on the receiving environment.

The applicant is requested to submit revised proposals to demonstrate that increased mitigation measures are proposed for the subject development and the cumulative impact of all datacentre development within the ownership of the applicant, this subject site being the last to be developed, should be considered and appropriate mitigation is requested to be proposed.

(ii) The Planning Authority considers that further information arising from the information contained within the EIAR is required. The mitigating measures for the approved development should be compared and contrasted in a separate report and the applicant is requested to demonstrate that additional and significant mitigating measures are provided for. The Planning Authority remains concerned that the proposed modifications represent an overdevelopment of the entire lands, and the cumulative effect is significant.

Please note that the Planning Authority welcomed the approved permission due to its substantial landscaping, screening and berm proposals. These items have been seriously eroded in the current application which is not generally acceptable to the Planning Authority and the Authority remains concerned with the cumulative impact of the datacentre development across the landholding.

36 Response No. 8

Refer to Appendix 2

37 Request No. 9

The location of the Central Administration / Gateway Building helps in integrating the Data-halls within the overall Microsoft development and in screening the halls from the R134 junction with the Business Park (refer to Photomontage Views 1 -4 (Figures 10.5.1A - 10.5.1D and Figures 10.5.2A -10.5.2D)).

Although this 'screening' is generally welcomed, the Planning Authority seek increased natural screening in the form of living green walls, berms and significantly increased planting.

Retention of existing vegetation along the Site boundary with the Griffeen River and the Business Park Road has a significant effect in reducing impact of the Proposed Project on views from within the Park and in ensuring that the development is in keeping with the nature of development in the Business Park as a whole.

The Planning Authority welcomes the retention of existing vegetation but seek:

(i) significant augmentation of this vegetation

(ii) the relocation of buildings away from roadside boundaries (the proposed development is considered to be located too close to the existing road network).

(iii) Significant green infrastructure that traverses the entire site/landholding and connecting back to the increased planting at the Griffeen River should be demonstrated.

(iv) Reduction in overall footprint of all structures on the subject site.

38 Response No. 9(i)

The overall landscape approach is to retain and provide a significant ecological buffer around the north-western, western and southern boundary of the site. Additional thickening of the existing hedgerow is proposed to the north of the CUB Building as per response to item 6(i). To the west of the CUB building the 10.5m wide way leave restricts planting. However a root barrier is proposed over the wayleave and a low mound formed to allow the proposed copses of Pine tree planting to be implemented.

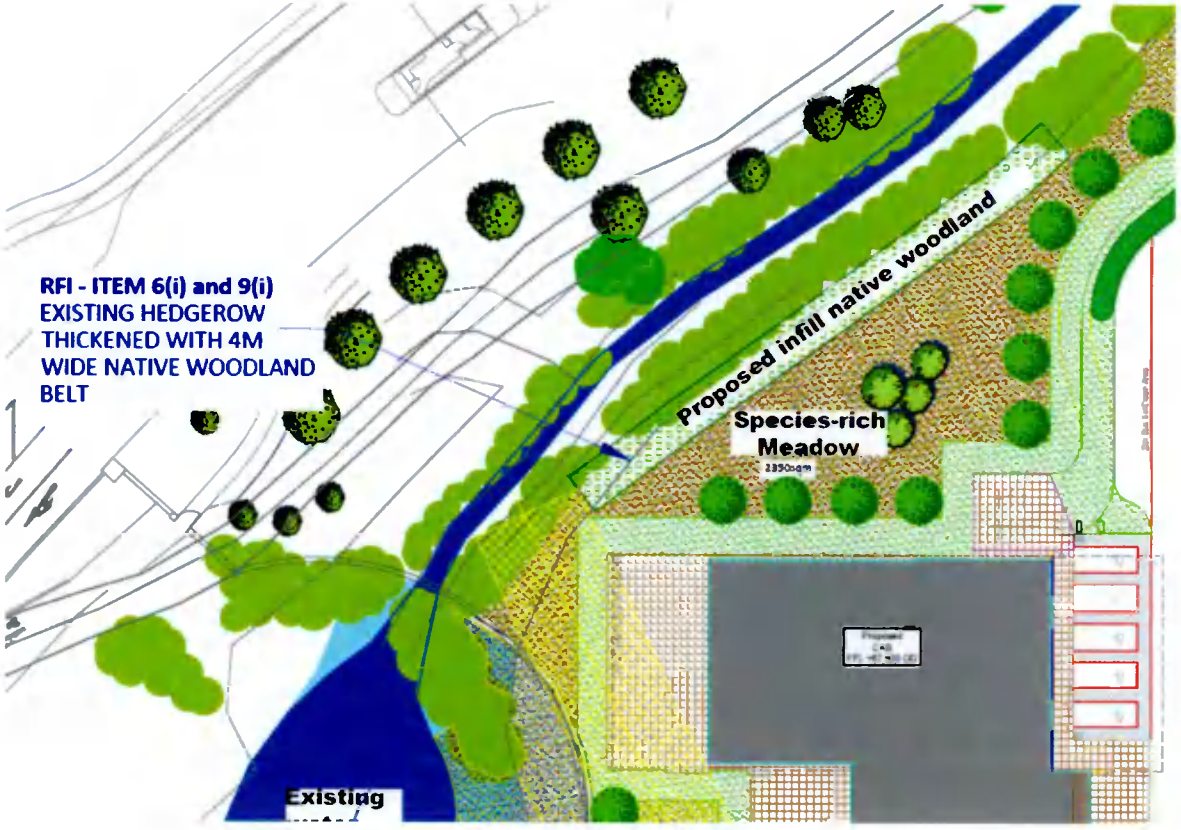
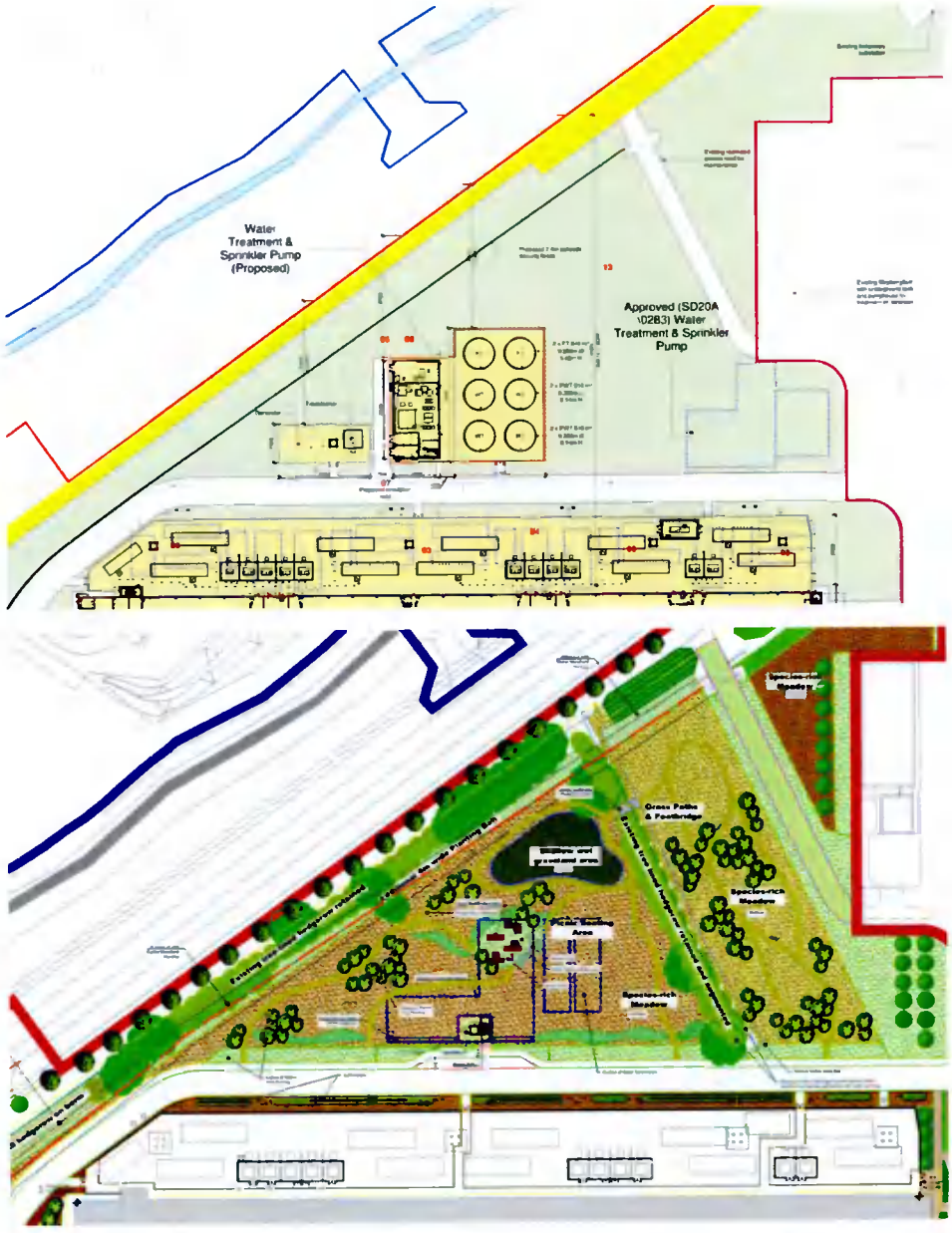


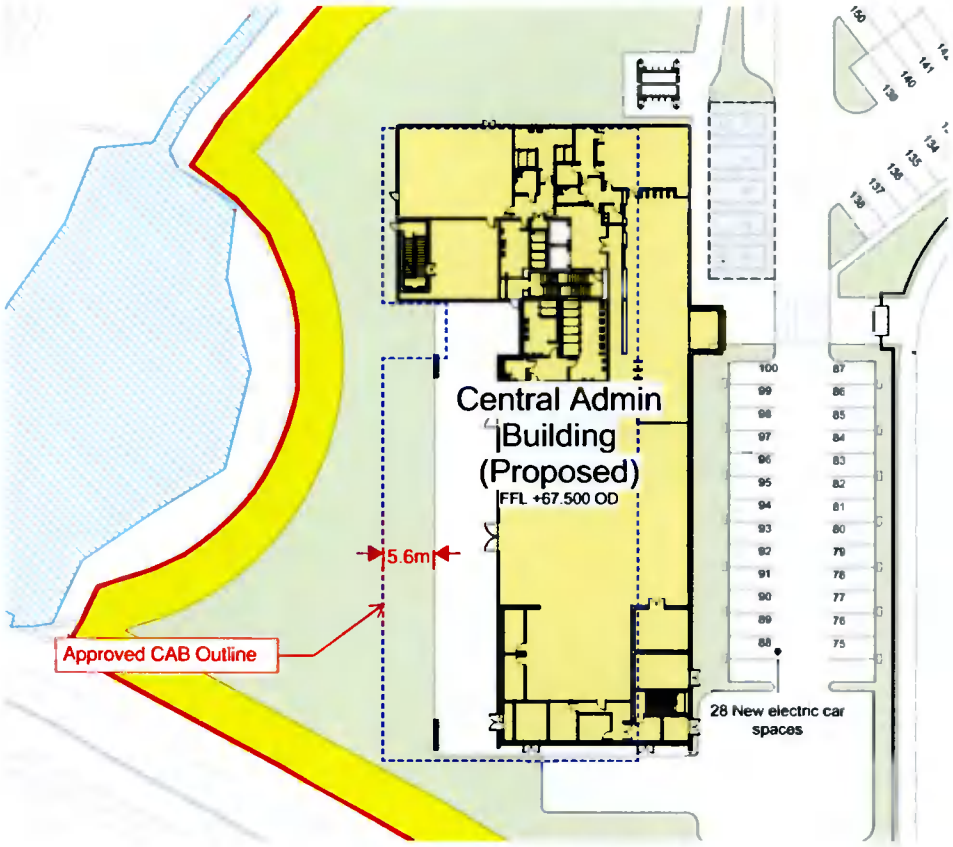
Figure 5 Extract from Site Masterplan north of CAB Building – Additional Planting to Hedgerow

39 Response No. 9(ii)

The Water Treatment Plant compound was the closest item to the boundary line, it has now been completely moved below ground with the exception of the ducting required for air intake/extract and the generator flues. This increased dramatically the landscape area to the North of DUB14 and allows for great distance between the boundary line to the north and the first major building. The flue stack for the generator is now moved further away from the boundary line. All the area to the north of DUB14 is now assigned to Landscape.



The CAB building has been moved 5.6 m away from the boundary compared to its position in the approved planning application.



All the possible actions to move the buildings away from the boundary line have been taken with great improvement for landscaping and the overall site layout.

Lands within the applicant's ownership have an established ecological/landscape corridor along the periphery of the Microsoft campus which includes the arterial road within Grange Castle Business Park (1.5km), the Nangor Road (0.6km) and Kilcarbury Business Park (1km). The planting commenced in 2016 during construction of DUB 06. It includes native tree planting such as Birch (*Betula pendula*), Pine (*Pinus Sylvestris*), Hazel (*Corylus avellana*), Wild Cherry (*Prunus avium*), Holly (*Ilex aquifolium*) and Oak (*Quercus robur*) and ivy groundcover planted along a graded bank. This ecological network (2.6km) extends around the campus and it is intended that this network will tie into the proposed ecological network being developed around the application site and the Griffeen River habitat.

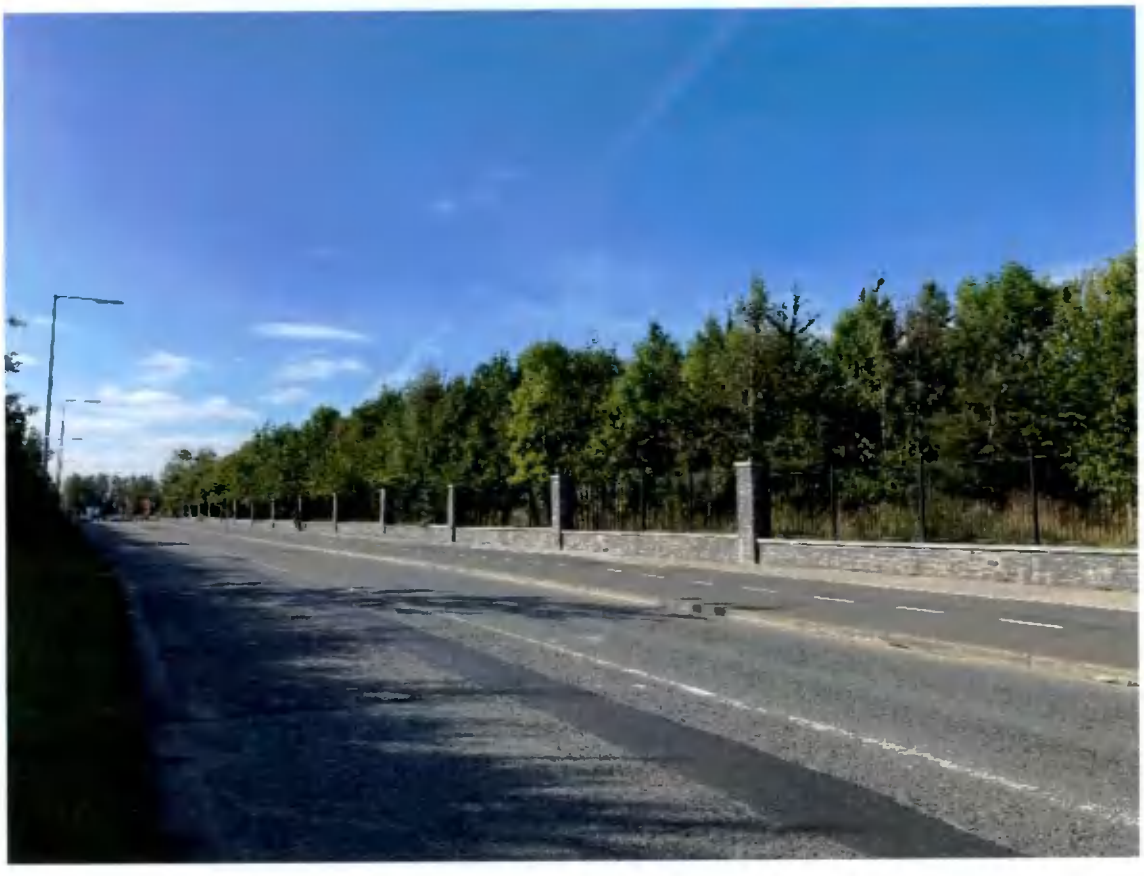


Figure 6 Existing Established Woodland Belt to Nangor Road Boundary

This corridor and linkage with existing hedgerows is the principal element in the biodiversity strategy. Within the campus there are also copses of trees and meadow areas. Within DUB 11 to the south east of the campus, there are 1.1 hectares of meadow established (see Figure 7 and 8 below).

Figure 7 Meadow in South-east of campus

Figure 8 Meadow in South-east of campus

Microsoft have also other biodiversity elements on campus such as bee hives and bug hotels. They are currently harvesting rainwater and are introducing the planting of vegetables on site for use by staff. Additional planting in the car park to provide more diversity include Lavender

for honeybees and butterflies. Recently Orchards have been planted (60No trees) through Host Ireland. Ongoing commitments to biodiversity will include hedgehog houses and bird boxes.

The Biodiversity Strategy / Green Infrastructure Drawings submitted with this request for Further Information (Nos. 6816-304 and 305) illustrate the green infrastructure and biodiversity strategy showing existing linear woodland belts that enclose the Microsoft campus and woodland belts proposed along the Nangor Road, which will be implemented as part of this application and under planning permission SD16A/0088.

Recreational opportunities within the application site provide mown grass paths through the meadows to the north of the campus with a picnic area (No1) and link the social space /employee garden to the east of DFUB 15 (No 8 on plan). This area provides a useable space for employee events and builds on the vegetable garden within other parts of the campus by introducing an edible garden. The sensory garden will provide an area of relaxation with a meandering path and seating areas below a pergola structure. Further measures include a living wall integrated into the planter design.

It is considered that this will be a positive contribution to the biodiversity objectives including additional recreational opportunities and social spaces within the north meadow area made possible by placing the water treatment plant and tanks below ground. This space is illustrated in the Cgi Plate 1 and Figure 10 extract from the masterplan.

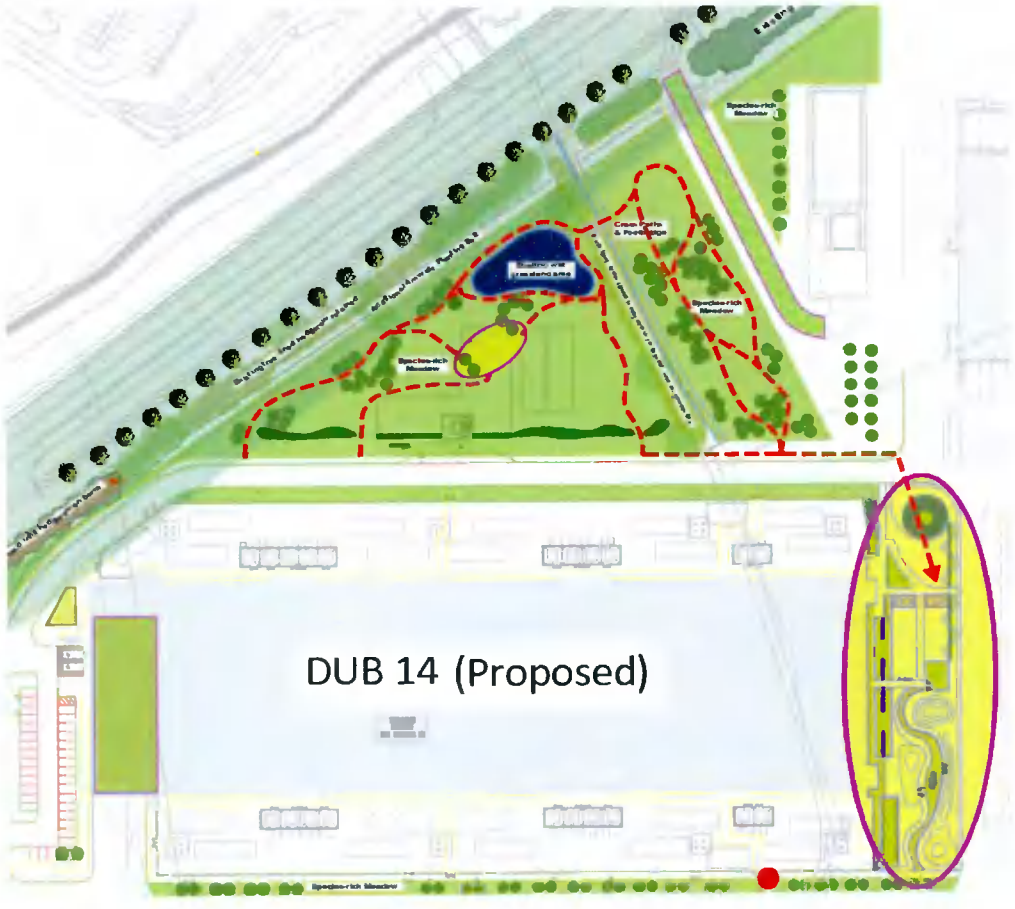


Figure 9 Extract from Site Masterplan north of CAB Building – Recreational Trail and Employee Garden

Other measures provide additional swales around the site roads shown on Drawing 6816-303

It has been noted that water no longer flows in the former stream channel to the north east of the site. However, it was also observed that the northern end of the former channel continued to be damp during wet weather and that section of former channel is backed by a fine, mature hedgerow. Therefore, this section of the former channel and associated mature hedgerow has been retained, augmented and set within a species-rich meadow with an area of wet grassland of c.7000 sq. (Refer to Figure 10).

There is an overflow proposed from the wetlands to the hedgerow/ drainage ditch which will reintroduce surface water to this hedgerow/ditch.

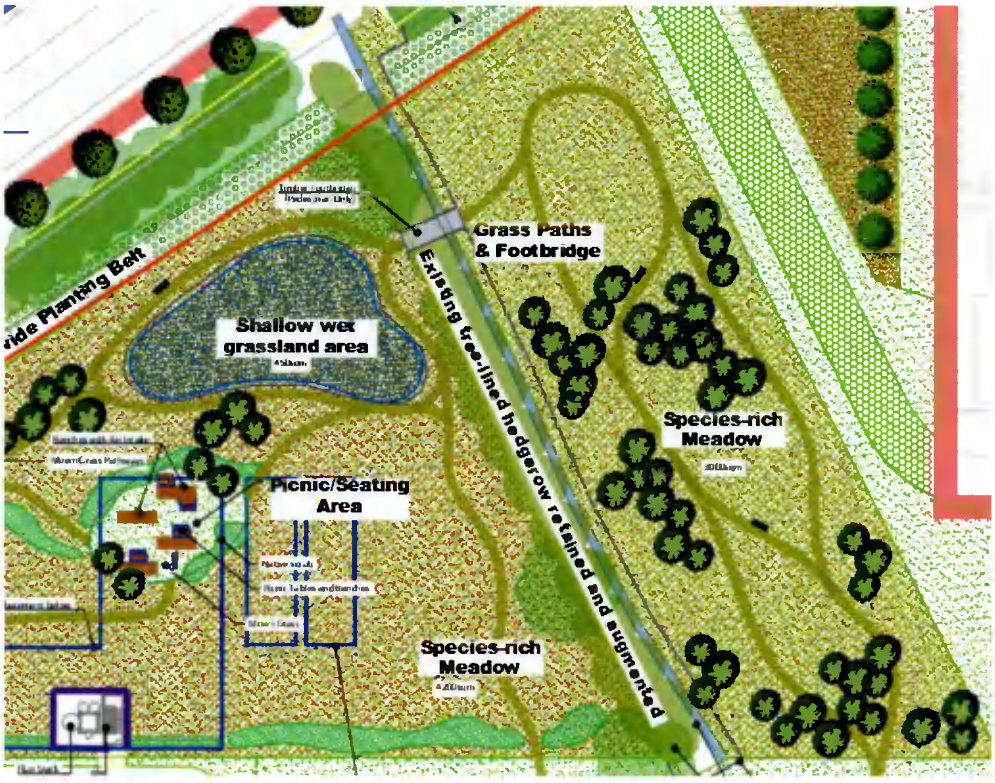


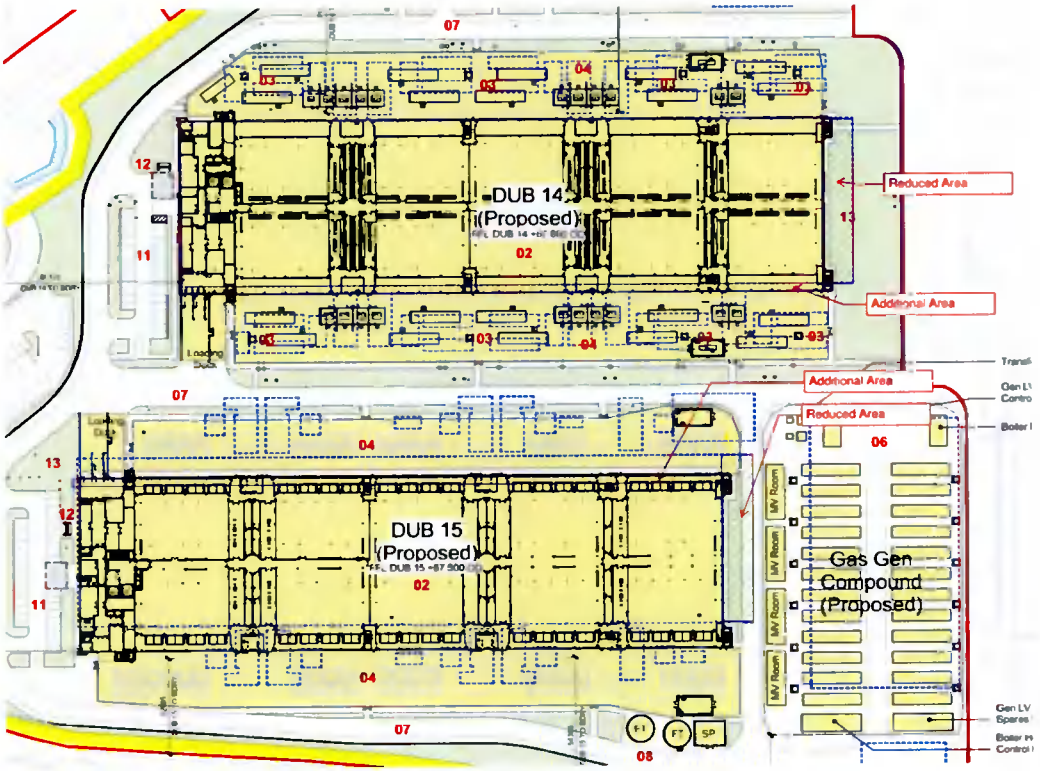
Figure 10: Extract from Landscape Masterplan (Drawing 6816-303) – line of former stream and existing hedgerow

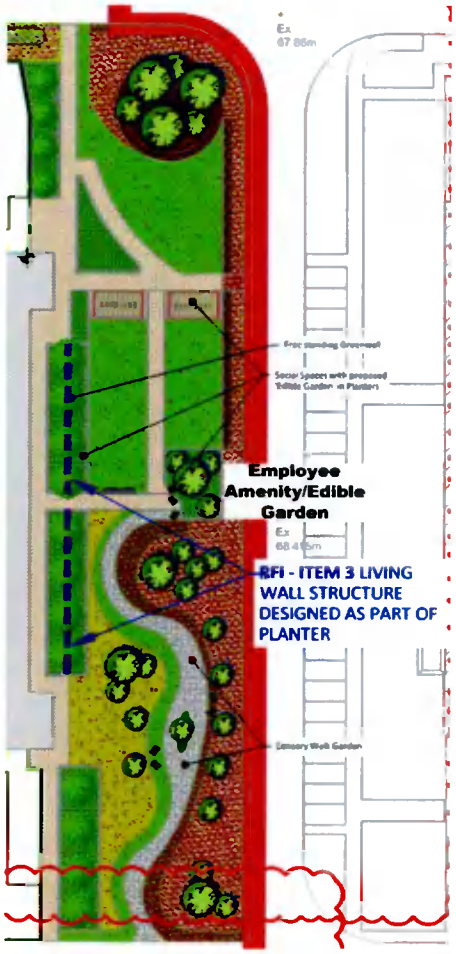
This former stream corridor and proposed meadows also connect and incorporate the existing mature tree-lined hedgerow which is retained on the north-western boundary of the site (parallel with estate road). Proposals also provide for augmenting this hedgerow with additional woodland planting within the site.

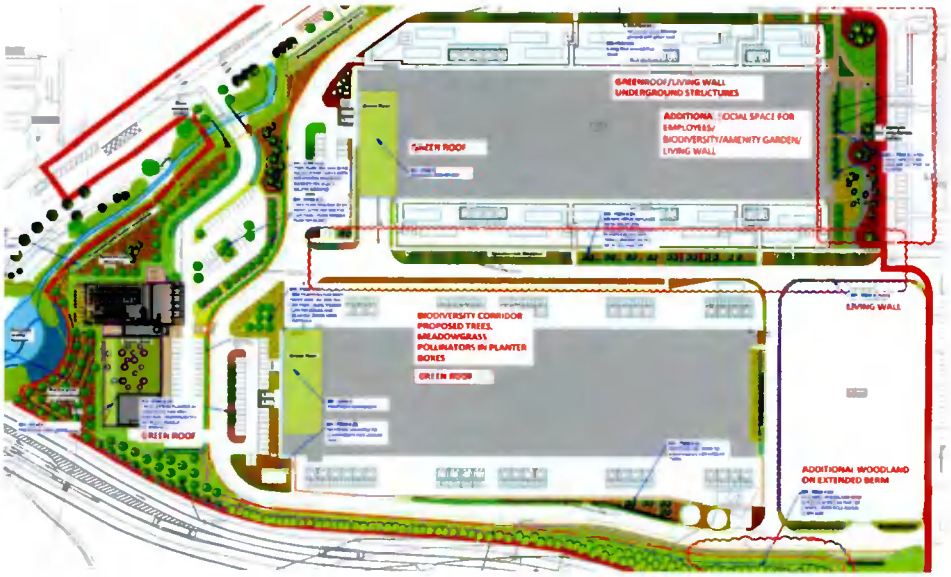
The overall landscape approach is to retain and provide a significant ecological buffer around the north-western, western and southern boundary of the site which ties into the existing ecological corridor around the campus. Recreational opportunities are also included for employees.

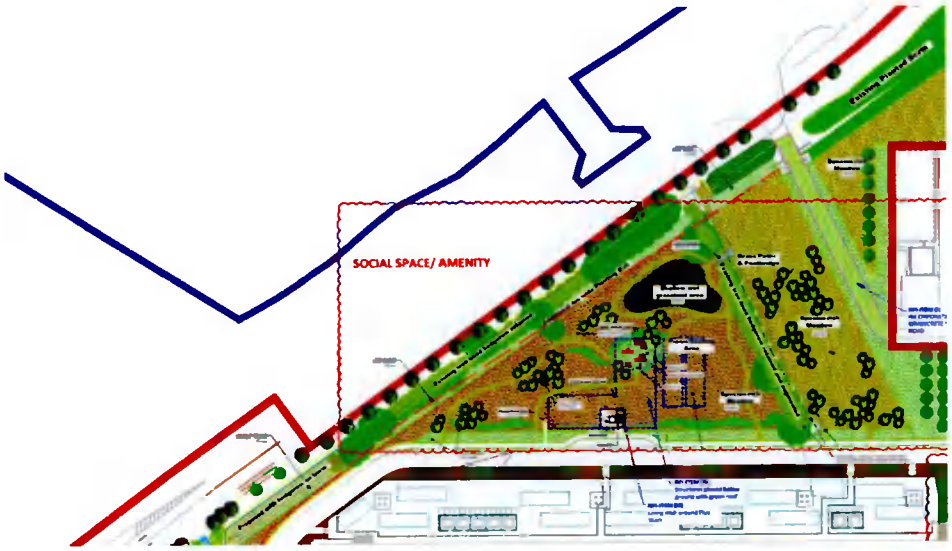
41 Response No. 9(iv)

The Data Centre buildings have a smaller footprint that the ones presented in the approved planning application. This is due to the optimization of the overall design and the use of the most cutting-edge technologies for optimizing the buildings services performance thus reducing the buildings impact on site and allowing for additional landscaping at the back of DUB14 (Employee Amenity/Edible Garden). The relocation of DUB15 on site allows the inclusion of a biodiversity corridor between DUB14 and DUB15. The overall reduction of buildings footprint on site is further enhanced by the removal of the Water Treatment Compound, now buried below ground, which allows to landscape in full the whole area north of DUB14.




Employee
Amenity/Edible
Garden
RFI - ITEM 3 LIVING
WALL STRUCTURE
DESIGNED AS PART OF
PLANTER


GREEN ROOF
BIODIVERSITY CORRIDOR
PROPOSED TREES
MEADOWGRASS
POLLINATORS IN PLANTER
BOXES
GREEN ROOF
LIVING WALL
ADDITIONAL WOODLAND
ON EXTENDED BERM


SOCIAL SPACE/ AMENITY

Appendix 1 – 19244 FI Response No 5

Architecture / Interiors

59 Northumberland Rd
Ballsbridge, Dublin 4
D04 WP89, Ireland

+353 1 668 1055
mail@rkd.ie
rkd.ie

RKD

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VL

7th October 2021

RE: APPLICATION REF: SD21A\0203 (Microsoft Operations Ltd.)
Response to FI Request No. 5

5) In the interests of clarification of what is being proposed the applicant is requested to submit a full schedule clearly detailing all development approved and all proposed amendments and the difference, to include clarity on:

(i) The statutory notices state that the proposed development will comprise of:

- A 'reduction in overall building footprint (for each approved Data Centre - DUB14 and DUB15) by 48sq.m (from 13,442sq.m to 13,394sq.m)' and
- An 'overall decrease in Gross Internal Floor Area (GFA) of 1,352sq.m in respect of DUB 14 and decrease of 1,453sq.m in respect of DUB 15' Both of the above statements appear to be contradictory. It is unclear what is being proposed. This requires clarification and exact floor areas for each structure should be submitted for assessment.

(i) Response:

a) The definition of the term "*building footprint*" is as follows:

Building footprint is the area on a project site used by the building structure, defined by the perimeter of the building plan.

In accordance with the above definition the measure of the building footprint for each of the proposed data centres as approved in application SD20/0283 = 13,442 sq.m

In accordance with the above definition the measure of the building footprint for each of the proposed data centres under the current application SD21D/0203 = 13,394 sq.m

13,442 sq.m - 13,394 sq.m= **48sq.m** (as correctly stated in the statutory notices).

b) The definition of the term "*gross floor area GFA*" is as follows:

Gross Floor Area is the area of a building measured to the internal face of the perimeter walls at each floor level.

Please note that whereas the footprint measure is a measurement at ground floor level only (and includes the external wall thickness), the GFA counts the floor area on all floor areas (but excludes the external wall thickness.

Conclusion: We have clarified the difference between "Building Footprint" and "Gross Floor Areas" in terms of their definitions and their respective different values in respect of the proposed development.

A full breakdown of approved and proposed floor areas set out in "Table A" below:

Please note that as a response to the wider FI request, changes have been made to the previously submitted Water Treatment Plant design (now proposed to be located underground) this has resulted in an increase in floor area to accommodate a staircase to serve the accommodation - proposed now at basement level rather than at ground floor level as indicated in the previously submitted proposals.

TABLE A **BUILDING / FUNCTION**	**SD20A/0283** **Approved Area Sq. Metre (GFA)**	***Quantum of External Plant counted erroneously as GFA in original application***	**Proposed Revised Areas Sq. Metre (GFA) SD21A/0203**	**Difference +/- m2** **Corrected**
DUB 14 Data Centre				
Ground Floor	14,155	179	13,394	
Mezzanine	983		0	
1st Floor	12,756		13,326	
TOTAL DUB 14	**27,894**		**26,720**	**-1,173m² ***
DUB 15 Data Centre				
Ground Floor	14,255	179	13,394	
Mezzanine	983		0	
1st Floor	12,756		13,326	
	27,994		**26,720**	**-1,275 m2**
Central Administration Building				
Basement	0		146	
Ground Floor	1,374		1505	
1st Floor	814		884	
2nd Floor	814		884	
3rd Floor	518		496	
	3,520		**3,915**	**+395 m²**
Sprinkler Tank Pump House (2 no. single storey) **Total area combined**	149.20		89.25	-60 m²
Water Treatment Plant – includes one sprinkler pump house	74.6		**691 (at basement level only)**	+616.4 m²
Gas Skid Buildings (3 no. single storey) **Total area combined**	134.4		134.4	-
TOTAL BUILDING GFA	**59,766**		**58,270**	**-1,496m²**

RKD

(ii) The statutory notices state that the proposed development will comprise of

- Omission of approved E-houses. It is unclear how many E-houses are proposed to be omitted in this application. Do the E-houses to be omitted relate only to DUB15 or to the entire development? (it is noted that other E-houses have been granted throughout the site). The number of E-houses to be omitted should be submitted for assessment.

(ii) Response:

The text of the submitted statutory notice has been mistyped in the SDCC letter requesting Additional Information and the number of E-houses has been omitted in this letter.
Also, the numbering of the various components of the proposed developments has been omitted in the letter. This does not match the wording as submitted in the statutory notices which states the following (direct extract):

*6) **Gas Generator Compound** – Relocation & reconfiguration of previously approved gas generator compound including:*

- *Additional 4 no. generators (from 20 no. approved to 24 no. proposed)*
- *Omission of approved 5 no. E-houses*
- *Additional 7 no. electrical rooms*
- *Additional 7 no. flues (from 5 no. approved to 12 no. proposed)*

The 5 no e-houses to be omitted were indicated in the previous application SD20/0283 within the gas compound. The notice confirms that the other e-houses shown in respect of DUB 14 and DUB15 are being reconfigured– see direct extract from statutory notice below:

1 *"Reconfiguration of associated external plant at ground level (including generators / E-Houses & transformers) flues, omission of approved Modular Electrical Rooms (MERs) and associated screening serving approved Data Centres DUB14 &15."*

Note there were a total of 16 no. e-houses indicated within the compounds on DUB 14 and 15 in the original application drawings.

For clarity – see copy of submitted statutory notice wording overleaf.

SOUTH DUBLIN COUNTY COUNCIL
SITE NOTICE

Microsoft Operations Ireland Ltd. intend to apply for PERMISSION for modifications and minor additions to previously approved scheme (Planning Register Reference SD20A/0283) at this site of c.16.23 Ha (in total) located at Grange Castle Business Park, Nangor Road & Grange Castle Business Park Estate Road, Clondalkin, Dublin 22. The application relates to lands located west of the existing MS Data Centre Campus and also a site located north of the main entrance to the business park from Grange Castle Road.

The development will comprise the following changes to previously approved scheme SD20A\0283:

1. Approved Central Administration Building (CAB): Proposed relocation of building to the east by approx. 7m. Proposed reconfiguration and setting out of building plans at all levels (including roof level) resulting in increase in building footprint of approximately 170m2 (from 1,424m2 to 1,594m2) associated changes to building elevations (design and finishes).
    - Approved single storey Cafeteria Element: Proposed additional basement level below cafeteria to accommodate plant, proposed 9 no. rooflights (2.8 m diameter) and 9 no. rooflight (1.8m diameter), inclusion of MEP Plant on roof level including new flue extending approx. 1m above parapet.
    - Approved four-storey Office element: Parapet at roof level to be raised by approx. 1.1m (increased from approved 19.5m in height to proposed 20.6m)
    - Overall increase in GIFA of 395m2
    - Reconfiguration of area available for PV panels and sedum roof finish in order to accommodate required MEP equipment at roof levels.
2. Approved Data Centres – DUB14 and DUB15: Proposed reconfiguration and setting out affecting building locations and plans at all levels (including roof level) resulting in reduction in overall building footprint (for each building) by 48m2 (from 13,442m2 to 13,394m2), associated changes to staircases design, building elevations (design and finishes. Increase in parapet height of Vent Houses (at roof level) by approx. 350mm and omission of previously proposed zone of sedum roof finish. Overall decrease in GIFA of 1,352m2 in respect of DUB 14 and decrease of 1,453m2 in respect of DUB 15. All plant equipment at ground level - reduced in height compared to approved layout so that the screening is deemed not required.
3. DUB 14: Reduction in height of approved flues by approx. 650mm, reduction in number of flues from 11 no. approved to 8 no. proposed.
4. Reconfiguration of associated external plant at ground level (including generators / E-Houses & transformers) flues, omission of approved Modular Electrical Rooms (MERs) and associated screening serving approved Data Centres DUB14 &15.
5. Relocation, modifications to design and expansion of approved Water Treatment Building and associated plant to include: 4 no. Water Treatment Tanks, 2 sprinkler tanks and relocated approved pump house (contained in the main Water Treatment Plant building) and 1 generator with additional proposed flue stack (height 30.75) and 1 no. transformer.
6. Gas Generator Compound – Relocation & reconfiguration of previously approved gas generator compound including:
    - Additional 4 no. generators (from 20 no. approved to 24 no. proposed).
    - Omission of approved 5 no. E-houses.
    - Additional 7 no. electrical rooms.
    - Additional 7 no. flues (from 5 no. approved to 12 no. proposed).
7. Modifications to approved layout of internal site roads, yards and footpaths.
8. Relocation and modifications to design of approved Sprinkler Tanks and Pump Houses: Pump House serving DUB 14: relocated into proposed Water Treatment Building and compound, redesign of approved larger tank into proposed two smaller tanks. Pump House serving DUB 15: Relocated to south of DUB15 the north facilitate space for electrical equipment redesign of approved larger tank into proposed two smaller tanks.
9. Relocation of Approved Gas Networks Ireland (GNI) gas skid & compound including approved 3 no. kiosk buildings.
10. Modifications to approved car park layouts and landscaping design.
11. Modifications to location and design of approved bicycle shelters.
12. Modifications to site development works, including underground water and building services provision, landscaping, internal security and compound enclosure fencing, and associated works.
13. The remainder of the development (including permitted temporary construction car parking) to be carried out in accordance with parent permission SD20A/0283.
14. An Environmental Impact Assessment Report (EIAR) has been submitted with this application.
15. The application relates to a development which comprises an activity requiring an integrated pollution prevention and control (IE) licence.

The planning application and EIAR may be inspected or purchased at the offices of South Dublin County Council, County Hall, Town Centre, Tallaght, Dublin 24 during its public opening hours of Monday to Friday from 9:00am to 4:00pm and may also be viewed on the Council's website – www.sdcc.ie.

A submission or observation in relation to the application may be made in writing to South Dublin County Council on payment of a fee of €20 within 5 weeks of receipt of the application by South Dublin County Council and such submissions or observations will be considered by the Planning Authority in making a decision on the application. The Planning Authority may grant permission subject to or without conditions or may refuse to grant permission.

Signed: _____
(Agent)

Contact: Vicky Landy B.Arch MRIAI

RKD Architects
59 Northumberland Road, Ballsbridge
Dublin 4

Date of erection of site notice: 05/07/2021

RKD

(iii) The statutory notice states that a total gross floor area is 56,566sq.m (Previously stated to be 59,766sqm under SD20A/0283). The applicant is requested to submit clarification of the breakdown of approved floor area and proposed floor and demonstrate clearly where the decrease takes place.

Response: Whereas the statutory site /newspaper notices do not reference a total floor area at all in respect of the development, the application form contains the table below – note there is no reference to a figure of 56,566 sq m. (as referenced above / in the letter requesting further information).
The applicant is not aware of the source of the figure 56,566sq.m as referred to above.

PLANNING APPLICATION FORM

11. Site Area:

Area of site to which the application relates in hectares	**13.07Ha + approved temporary car park area 3.16 Ha = 16.23** **16.23 ha**

12. Where the application relates to a building or buildings:

*Gross floor space of any **existing** building(s) in sq. m*	**291**
*Gross floor space of **proposed** works in sq. m*	**57,986** *(Note: 59,766m2 previously approved SD20A\0283 scheme)*
*Gross floor space of work to be **retained** in sq. m (if appropriate)*	**N.A.**
*Gross floor space of any **demolition** in sq. m (if appropriate)*	**291** *(Note: demolition previously approved SD20A\0283 scheme)*
Note: Gross floor space means the area ascertained by the internal measurement of the floor space on each floor of a building i.e. floor areas must be measured from **inside** the external wall.	

See Table A in response to 5(I) above – the overall decrease in area is **1,496m2.**
We note that some confusion was caused in respect of the areas as per approved development SD20A/0283 due to some areas of external plant were included erroneously in the GFA sub-totals for the previous application SD20A/0283.
Please note that this error was not carried over in the **total** GFA area calculation in respect of SD20A/0283 i.e. 59,766m2 – this was calculated correctly.

The amended total of the proposed area is now confirmed at **58,270m2 (see Table 1 above for full breakdown).**

RKD

Appendix 2 – Response to Request no.8

McGill Planning
Chartered Town Planners
22 Wicklow Street
Dublin 2 D02 VK22
Tel +353 1 2846464
Email info@mcgplanning.ie

SDCC PLANNING APPLICATION SD21A/0203
RESPONSE TO FURTHER INFORMATION REQUEST ITEM 8

1. INTRODUCTION

McGill Planning Ltd. administered the EIAR prepared as part of the current Planning Application (Ref SD21A/0203) submitted by Microsoft Operations Ireland Ltd for modifications and additions to previously approved scheme (Planning Register Reference SD20A/0283) comprising the following:

- *Approved Central Administration Building (CAB): Proposed relocation of building to the east by approx. 7m. Proposed reconfiguration and sgetting out of building plans at all levels (including roof level) resulting in increase in building footprint of approximately 170m2 (from 1,424m2 to 1,594m2) associated changes to building elevations (design and finishes).*
    - *Approved single storey Cafeteria Element: Proposed additional basement level below cafeteria to accommodate plant, proposed 9 no. rooflights (2.8 m diameter) and 9 no. rooflight (1.8m diameter), inclusion of MEP Plant on roof level including new flue extending approx. 1m above parapet.*
    - *Approved four-storey Office element: Parapet at roof level to be raised by approx. 1.1m (increased from approved 19.5m in height to proposed 20.6m)*
    - *Overall increase in GIFA of 395m2*
    - *Reconfiguration of area available for PV panels and sedum roof finish in order to accommodate required MEP equipment at roof levels.*
- *Approved Data Centres – DUB14 and DUB15: Proposed reconfiguration and setting out affecting building locations and plans at all levels (including roof level) resulting in reduction in overall building footprint (for each building) by 48m2 (from 13,442m2 to 13,394m2), associated changes to staircases design, building elevations (design and finishes. Increase in parapet height of Vent Houses (at roof level) by approx. 350mm and omission of previously proposed zone of sedum roof finish. Overall decrease in GIFA of 1,352m2 in respect of DUB 14 and decrease of 1,453m2 in respect of DUB 15. All plant equipment at ground level - reduced in height compared to approved layout so that the screening is deemed not required.*
- *DUB 14: Reduction in height of approved flues by approx. 650mm, reduction in number of flues from 11 no. approved to 8 no. proposed.*
- *3.a) DUB 15: Change to level of ground floor and associated increase in overall building height of approx. 700mm (parapet height increased from approved +83.0m O.D. to proposed +83.7m O.D.).*
- *Reconfiguration of associated external plant at ground level (including generators / E-Houses & transformers) flues, omission of approved Modular Electrical Rooms (MERs) and associated screening serving approved Data Centres DUB14 &15.*
- *Relocation, modifications to design and expansion of approved Water Treatment Building and associated plant to include: 4 no. Water Treatment Tanks, 2 sprinkler*

tanks and relocated approved pump house (contained in the main Water Treatment Plant building) and 1 generator with additional proposed flue stack (height 30.75m) and 1 no. transformer.

- *Gas Generator Compound – Relocation & reconfiguration of previously approved gas generator compound including:*
  - *Additional 4 no. generators (from 20 no. approved to 24 no. proposed).*
  - *Omission of approved 5 no. E-houses.*
  - *Additional 7 no. electrical rooms.*
  - *Additional 7 no. flues (from 5 no. approved to 12 no. proposed).*
- *Modifications to approved layout of internal site roads, yards and footpaths.*
- *Relocation and modifications to design of approved Sprinkler Tanks and Pump Houses: Pump House serving DUB 14: relocated into proposed Water Treatment Building and compound, redesign of approved larger tank into proposed two smaller tanks. Pump House serving DUB 15: Relocated to south of DUB15 the north facilitate space for electrical equipment redesign of approved larger tank into proposed two smaller tanks.*
- *Relocation of Approved Gas Networks Ireland (GNI) gas skid & compound including approved 3 no. kiosk buildings.*
- *Modifications to approved car park layouts and landscaping design.*
- *Modifications to location and design of approved bicycle shelters.*
- *Modifications to site development works, including underground water and building services provision, landscaping, internal security and compound enclosure fencing, and associated works.*
- *The remainder of the development (including permitted temporary construction car parking) to be carried out in accordance with parent permission SD20A/0283.*

McGill Planning Ltd. also administered the EIAR for the original (parent) permission which established the two data centres (DUB 14 & 15), the Central Administration Building and all associated works, landscaping and services provision.

The EIAR team for the current application comprise the following:

Chapter	Title	Consultant
1.0	Introduction & Methodology	McGill Planning Ltd.
2.0	Alternatives	McGill Planning Ltd.
3.0	Description of Development	McGill Planning Ltd.
4.0	Population & Human Health	McGill Planning Ltd.
5.0	Biodiversity	Moore Ecology
6.0	Lands, Soils & Geology	Arup Engineers
7.0	Hydrology & Water Services	Arup Engineers
8.0	Noise & Vibration	AWN Consulting
9.0	Air Quality & Climate Impact	AWN Consulting
10.0	Landscape & Visual	BSM Landscape Architects
11.0	Traffic & Transportation	TPS Transport Consultants
12.0	Material Assets	McGill Planning Ltd.

13.0	Waste Management	McGill Planning Ltd.
14.0	Cultural Heritage	Reliqua Archaeologists
15.0	Interactions	McGill Planning Ltd.
16.0	Schedule of Mitigations Measure	McGill Planning Ltd.

Following receipt of the Further Information Request and the proposed amendments to the design in response to same, prepared principally by Arup and BSM, the EIAR has been revisited and the following responses to Further Information No. 8 should be read as an Addendum to the EIAR in this regard.

Further Information Request Item 8(i)
The Planning Authority notes the contents of the EIAR. The Planning Authority had assessed the approved development on the basis of the original EIAR. The proposed amendments are not considered to be minor and it is considered that they will have a major impact on the receiving
environment. The applicant is requested to submit revised proposals to demonstrate that increased mitigation measures are proposed for the subject development and the cumulative impact of all datacentre development within the ownership of the applicant, this subject site being the last to be developed, should be considered and appropriate mitigation is requested to be proposed.

Further Information Request Item 8(ii)
The Planning Authority considers that further information arising from the information contained within the EIAR is required. The mitigating measures for the approved development should be compared and contrasted in a separate report and the applicant is requested to demonstrate that additional and significant mitigating measures are provided for. The Planning Authority remains concerned that the proposed modifications represent an overdevelopment of the entire lands, and the cumulative effect is significant.

Please note that the Planning Authority welcomed the approved permission due to its substantial landscaping, screening and berm proposals. These items have been seriously eroded in the current application which is not generally acceptable to the Planning Authority and the Authority remains concerned with the cumulative impact of the datacentre development across the landholding.

2.0 RESPONSE TO FI ITEM 8

We refer the planning authority to the reports and drawings prepared by BSM Landscape Architects and Arup as part of this Further Information Response which outline a significant number of positive amendments to the proposed design to further mitigate for the impact of the proposed amended Data Centres and Administrative Building.

We note the following additional mitigations measures:

- The planting of circa 0.63 hectares of woodland to the south boundary which will replace the hedgerows lost within the campus prior to commencement of any campus development. This woodland area is more extensive than the proposed tree planting along the southern boundary in the parent permissions

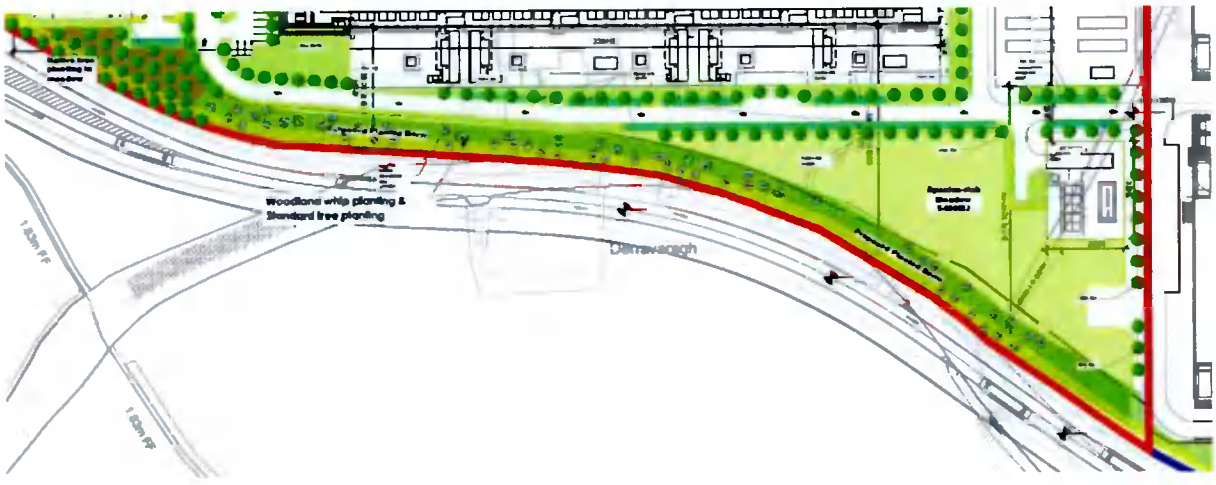


Figure 1: Permitted Landscaping at Southern Boundary

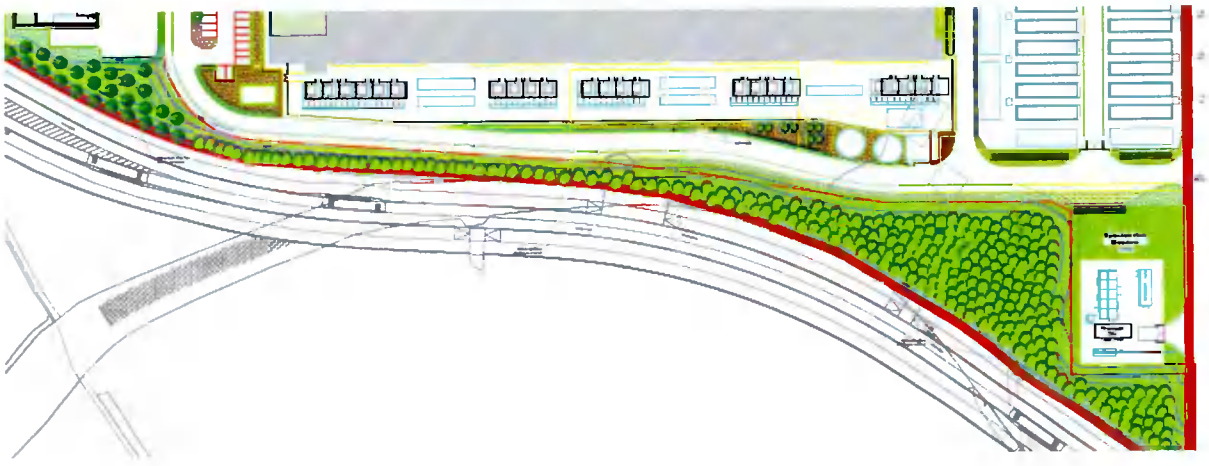


Figure 2: Revised Landscape Proposal at Southern Boundary

- Additional woodland planting to augment the existing hedgerows along the Griffeen River.

Figure 3: Permitted Tree Planting along Griffeen

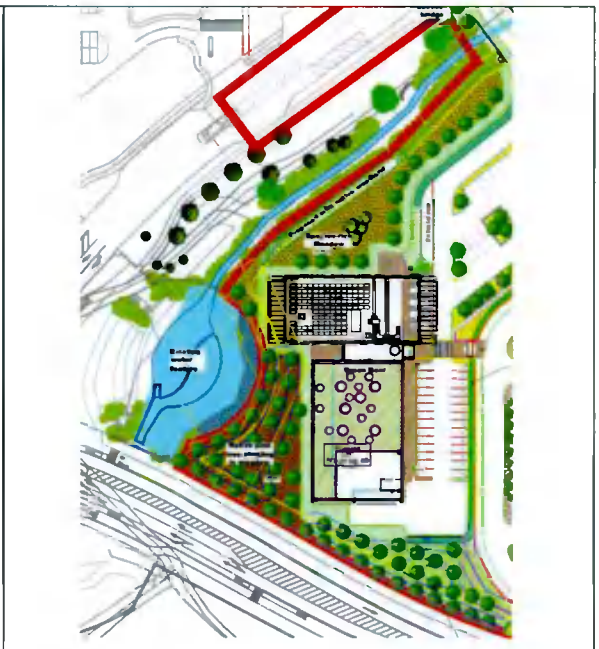


Figure 4: Revsied with Additional Tree Planting along Griffeen

- The revised layout includes additional trees within the car park (23 No) and on the south side of DUB 14 and the west side of DUB 15 (52No).
- A living wall is proposed along the north and west side of the Gas Generator Plant and around the Flue Stack and Access Staircase within the northern portion of the site.
- An employee garden/ social space is proposed to the east of DUB 14 measuring 2750sqm. This is a space for employees to gather, grow edible crops, and relax within the sensory garden. It is also designed to connect to the meadow area to the north with walks provided using mown grass paths. This additional space was not included within the permitted development (Reference SD20A/0283).

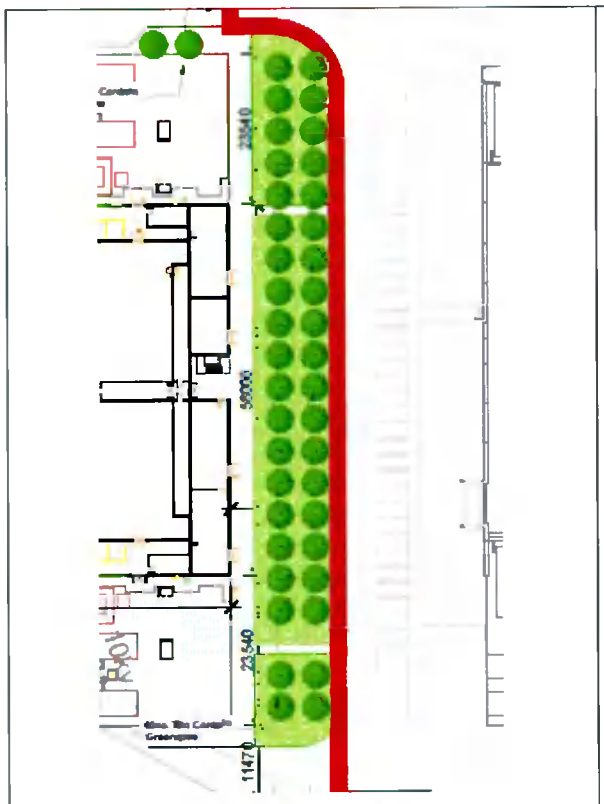


Figure 5: Permitted Tree Planting east of DUB 14

Figure 6: Proposed Employee Amenity Garden east of DUB 14

- A living wall is proposed on the east side of DUB 14 within the employee garden.
- An ecological corridor is provided between DUB 14 and DUB 15 which proposes a meadow along the verges and trees located in planter boxes owing to multiple services in this area. The planters will be planted with trees such as Amelanchier underplanted with pollinating perennials such as lavender, salvia, verbena. Again this was not provided for in the original permission.

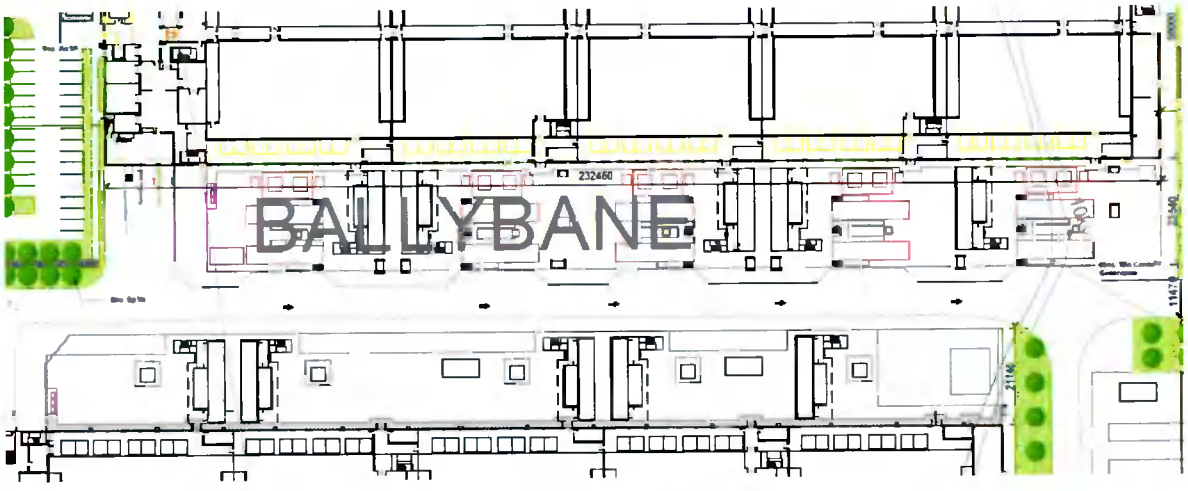


Figure 7: Permitted Service Area Between DUB 14 and 15

Figure 8: Proposed Ecological Corridor Between DUB 14 and 15

- To the north of the site the proposal to relocate the water treatment plant and generator below ground will provide compensatory habitats by extending the meadow grassland across this open space, achieved by providing a green roof to the structures below ground. The structures that appear above ground such as the air intake units will be integrated into a series of benches and with picnic tables and will form an outdoor social/ amenity space for employees. Areas of scrub will be planted around the perimeter of the space to provide a habitat for birds in addition to providing shelter.
- The provision of green roofs on the administrative areas of the two data centres and on the Central Administrative Building.

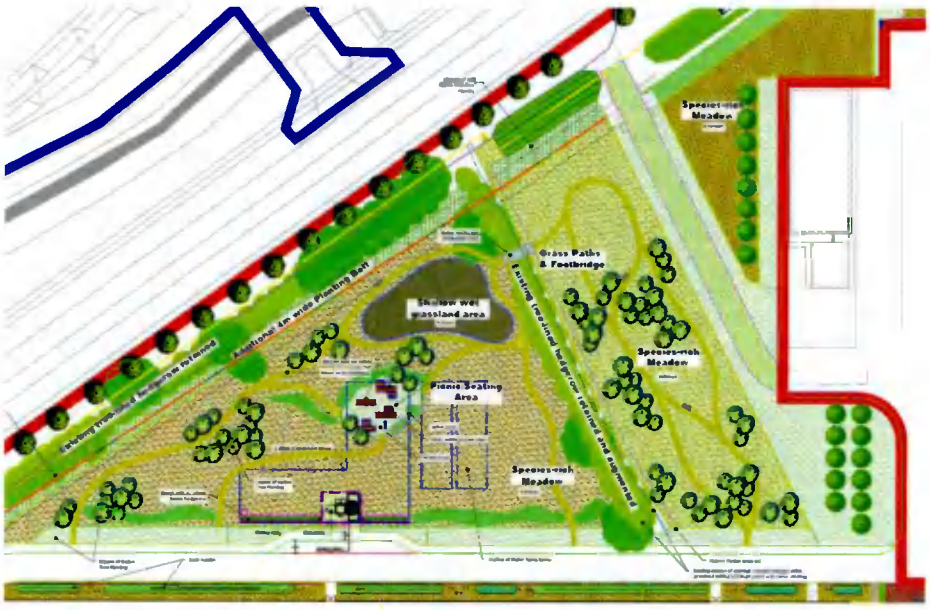


Figure 9: Revised Meadow Grassland Area with Water Treatment Plant Undergrounded

The impact of these additional measures have been positively assessed by Moore Ecology as per the attached report.

The impact on reducing the car parking provision to facilitate more planting has also been assessed by TPS Transport and considered acceptable and more sustainable.

3.0 CONCLUSION

Additional and significant mitigation measures are now provided for as requested by SDCC. Furthermore it is considered that, cumulatively, the additional landscape and ecological mitigation measures proposed in this Further Information Response will result in a net positive impact on the local environment, when compared to the parent permission and addresses the concerns of potential overdevelopment and cumulative additional environmental impact raised.

McGill Planning Limited
October 2021

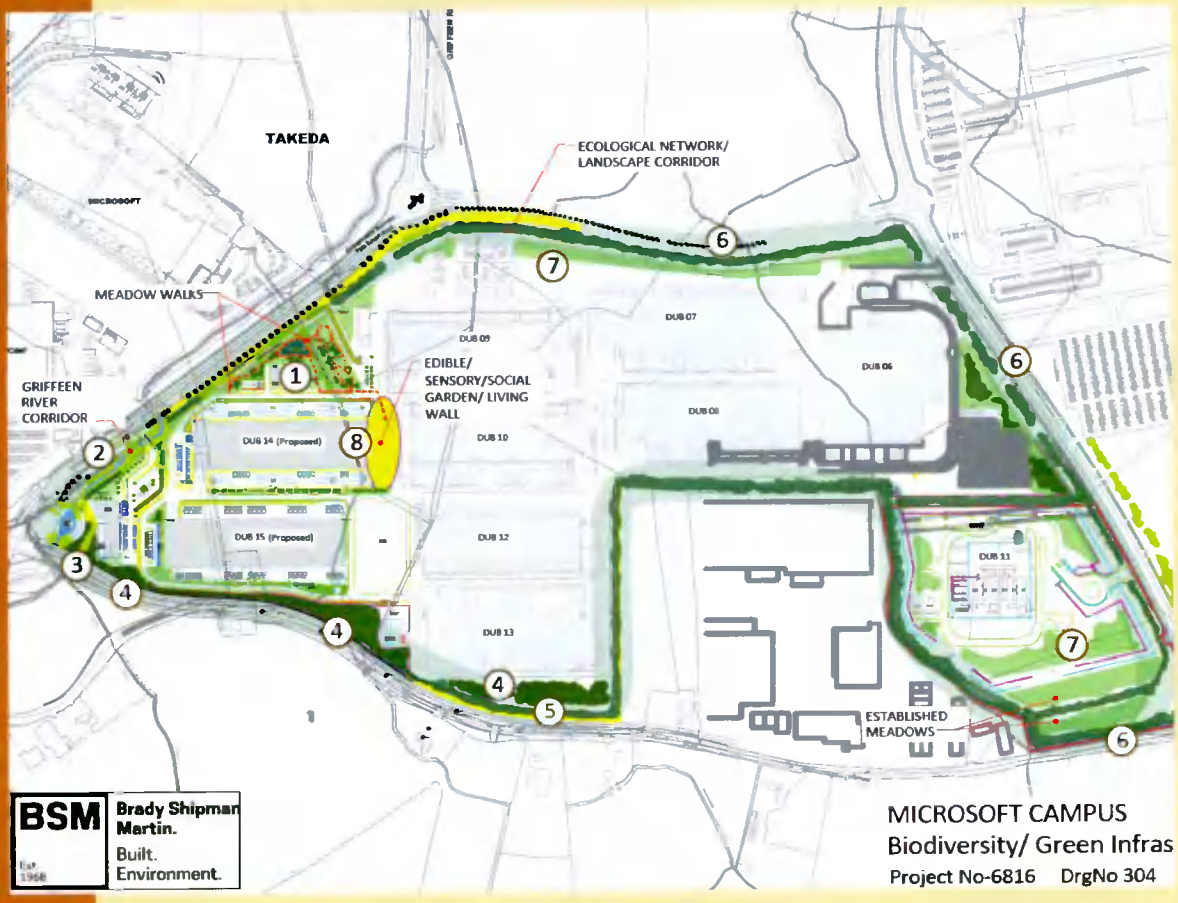
Appendix 3 – Biodiversity Technical Note

SDCC Ref: SD21A/0203

Applicant: Microsoft Operations Ireland Ltd.

Date of RFI: 13th September 2021

Biodiversity Technical Note



Prepared By:

Moore Group -
Environmental Services

On behalf of:
Microsoft Operations Ireland Ltd.

Job Number 19013
4 October 2021

Project Proponent	Microsoft Operations Ireland Ltd.
Project	SDCC Ref: SD21A/0203
Title	SDCC Ref: SD21A/0203 Applicant: Microsoft Operations Ireland Ltd. Date of RFI: 13th September 2021 Biodiversity Technical Note

Project Number	19013	Document Reference	19013 Biodiversity Tech Note Rev1	
Revision	Description		Author	Date
Rev1	RKD Edits		G. O'Donohoe	4 Oct 2021
Moore Archaeological and Environmental Services Limited				

INTRODUCTION

This Technical Note responds to parts of a request for further information in respect of landscape and biodiversity and specifically comments on the Landscape proposals prepared by Brady Shipman Martin in support of Biodiversity at the Microsoft Campus at Grange Castle and the proposed development SDCC Ref: SD21A/0203.

The Technical Note was compiled by Ger O'Donohoe (B.Sc. Applied Aquatic Sciences (GMIT, 1993) & M.Sc. Environmental Sciences (TCD, 1999) of Moore Group - Environmental Services for Microsoft Operations Ireland Ltd. Ger prepared the EIAR Biodiversity Chapter and Report for AA Screening for the Proposed Development. He has over 25 years' experience in environmental impact assessment and has completed numerous reports for the purposes of AA Screening as well as Natura Impact Statements for hundreds of developments including data storage facilities and large mixed use developments.

BIODIVERISTY RESPONSE

Brady Shipman Martin have prepared in response to the request for further information [RFI] items No.3, 4 and 6 and 9(i) and (iii).which I have reviewed and confirm are appropriate to the protection and enhancement of Biodiversity as requested.

The landscape masterplan submitted with the planning amendment application included a number of biodiversity proposals along the north, west and southern boundaries. Nevertheless these plans have been reviewed and an updated landscape plan submitted with the further information (Refer to Brady Shipman Martin plan 6816-303).

The wording of the response is not repeated here but is acknowledged as having considered the Biodiversity Chapter of the EIAR and discussions between the Project Architects, Brady Shipman Architects, the Heritage Office and Parks Section of SDCC and this Ecologist regarding the potential loss of Biodiversity, halting the loss and enhancement of Biodiversity through comprehensive Landscape Plans.

The overall landscape approach is to retain and provide a significant ecological buffer around the north-western, western and southern boundary of the site which ties into the existing ecological corridor around the campus. Recreational opportunities are also included for employees. Additionally, the plans provide for corridor potential now between the Data Centres and not just around the edges.

Yours sincerely,

Ger O'Donohoe, Principal Ecological Consultant, Moore Group, 04/10/2021

Appendix 4 – Traffic Report

Proposed Microsoft Data Centres
Grange Castle Business Park
Clondalkin
Co. Dublin

Traffic Report
as
Response to Further Information
South Dublin County Council
Planning Ref: SD21A/0203

Prepared
for
RKD Architects

October 2021

TPS M Moran & Associates
Rathasker Road, Naas, Co. Kildare.
Traffic and Transportation Planning Consultants

Contents.

1.0 Introduction.

1.1 A planning application was lodged with South Dublin County Council on the 20th July 2021 to amend a previously permitted planning permission granted by South Dublin County Council in relation to Planning Ref: SD20A/0283.

1.2 This planning application (Planning Ref: SD21A/0203) was the subject of a Further Information request issued by South Dublin County Council on the 15th September 2021 which at Item 4 (1) requires the applicant to undertake a review of the proposed planting within the Microsoft Office car park and produce a revised site layout.

1.3 In order to address this Item a revised site layout plan is proposed to reduce the extent of car parking within this area from the permitted 96 spaces to 62 parking spaces. This reduction in office related parking facilitates enables additional planting and landscaping within this area.

2.0 Permitted Microsoft Operations Ireland Ltd Development.

2.1 TPS M Moran & Associates as specialist traffic consultants were retained by RKD Architects to undertake a Traffic Impact Assessment (TIA) relating to the Microsoft Operations Ireland Ltd development at Grange Castle International Business Park, Clondalkin, Dublin 22 for 2 data server centres (DUB14 and DUB15)

2.2 In addition, to the proposed 2 data server centres, planning permission was also granted for a 3500sq metre Microsoft administration office land use to the west of these data centres.

2.3 This permitted development was included within an Environmental Impact Assessment and was coordinated by McGill Planning Chartered Town Planning Consultants.

2.4 The extent of office related parking was identified within the TIA which was included within the Environmental Impact Assessment and for the purposes of addressing Item 4 (1) of the Further Information are reproduced below:

> *The extent of car parking associated with the proposed Microsoft office development when reviewed with Table 11.23 of the South Dublin County Council Development Plan 2016 to 2020 suggests 1 space per 50sq metres.*
>
> *Based on the above parking standards 70 parking spaces would be required to serve this Microsoft office proposal.*
>
> *It is proposed to provide 96 parking spaces to serve the office development.*

Extract from TIA in italics.

2.5 The TIA also included a Mobility Management Plan which could be applied to the proposed Microsoft Administration and Campus Building where Microsoft support office staff and Microsoft operational and service support staff would be employed.

2.6 This Mobility Management Plan identified that the office based employees would access the campus building from Monday to Friday between 0800hrs and 0900hrs and leave the campus from 1700hrs onwards.

2.7 An internal bus route is proposed which would connect the existing and proposed data centres to the campus office building. This bus route would enable existing and future data centre staff to access this central focal point campus for meetings, training and use of the gym and canteen.

2.8 A reasonable target for reducing car borne employee trips (both existing and future) with the development of the Mobility Management Plan suggested a 10% reduction in these trips over time. The suggested reduction in vehicular trips and the possible increase in other transport modes is again reproduced within Table 1.0 below.

Existing Mode of Transport	Trip as a %	MMP Target
Car	78%	68%
Bus	7%	9%
Rail and Walk	3%	4%
Rail and Cycle	2%	4%
Motorcycle	1%	1%
Walk	5%	6%
Car Share	4%	8%
Total	100%	100%

Projected MMP Employee Targets Table 1.0

2.9 Considering all of the above, the reduction in office car parking provision from the extent of permitted parking to some 62 parking spaces would have no material traffic impact on the operation of this development or on the capacity of the adjacent road network.

3.0 Conclusion.

3.1 We consider that the above, enables the applicant, to as suggested by the Local Authority within Item 4 (1) of the Further Information request issued on the 15th September 2021 to indicate an increase in the proposed planting within the Microsoft Office car park.

Appendix 5 – Drawings list

ARUP

Project Deliverables List

Microsoft DUB14/15

Architecture and Civil

Document Number	Scale	Document Title				Revision
		Title 1	Title 2	Title 3	Title 4	
DUB 14/15						
Civil						
DUB 14-15_C-D-03	1:500	Proposed Surface Water Drainage	Sheet A			P02
DUB 14-15_C-D-04	1:500	Proposed Surface Water Drainage	Sheet B			P02
DUB 14-15_C-D-07	1:1000	Proposed Catchment Areas Overall Site Finishes				P01
DUB 14-15_C-D-14	1:1000	Existind DUB9/10/12/13 Catchment Areas				P01
DUB 14/15_C_F-03	N/A	Typical Drainage Details	Sheet 2			P01
Architecture						
DUB 14-15_A-1-010	1:2000	Overall Site Plan	Proposed			P02
DUB 14-15_A-1-011	1:1000	Overall Site Plan	Proposed			P02
DUB 14-15_A-1-013	1:500	Enlarged Site Plan	Proposed DUB 14 and Substation			P02
DUB 14-15_A-1-014	1:500	Enlarged Site Plan	Proposed DUB 15 and Admin Building			P02
DUB 14-15_A-1-015	1:2000	Site Plan	Construction Phasing Drawing			P02
DUB 14-15_A-1-050	1:100	Proposed Sprinkler Tank and Pump Details				P02
DUB 14-15_A-1-053	1.20	Proposed Boundary and Fence Details				P02
DUB 14-15_A-1-070	1:500	Approved and Proposed Site Sections	Sheet 1			P02
DUB 14-15_A-1-071	1:200	Approved and Proposed Site Sections	Sheet 2			P02

BSM Brady Shipman Martin.
Est. 1968
Built Environment.

PF 01 20-04-2018

Document Register

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PROJECT NUMBER	6816
PROJECT NAME	
Microsoft Dub 14/15	

DOCUMENT TITLE	Size	Scale	Document Number	Added By	Comment
Landscape Masterplan Overall	A0	1:1000	6816_303	AP	
Landscape Masterplan (sheet 1 of 2)	A0	1:500	6816_303A	AP	
Landscape Masterplan (sheet 2 of 2)	A0	1:500	6816_303B	AP	
Biodiversity/ Green Infrastructure Strategy	A2	1:3000	6816_304	AP	
Biodiversity/Green Infrastructure Network	A2	NTS	6816 - 304	AP	
View North of Meadow Area	A3	NTS	Plate 1	AP	
View South of Social Space/Employee Garden	A3	NTS	Plate 2	AP	

Appendix 6 – 6816 CGI Figures