CFI

RMDA
LANDSCAPE ARCHITECTS + CONSULTANTS

Cuckoo's Nest, Greenhills Road, Kilnamanagh, Dublin 24

CFI Submission

Ref No. SD22A/0285

10/03/23

All-Ireland Pollinator Plan
www.pollinators.ie

Dear Sir / Madam,
Please find landscape response to items (2 and 3a,3b,3c)

We wish to submit drawings and this response to the Clarification of Information, with respect to the landscape items.

Please find drawings;
DWG 1 - Rev I – Landscape Masterplan - A1
DWG 3 – Rev I – Roof and Terrace Plan - A1
DWG 4 – Rev I – Planting Plan - A1
DWG 5 – Rev I – Combined Landscape and Drainage Plan - A1
Landscape Rationale (Attached) - A3

We wish to respond to the Clarification of Additional Information Thus:
Items to be addressed:

2. Public Open Space
The applicant is requested to provide greater detail about proposals to mitigate the absence of public open space provision on site. In this regard the applicant is requested to liaise with the Public Realm Department and agree suitable upgrades to Tymon Park that would benefit the future occupants of the proposed development.

3. Sustainable Urban Drainage Systems, Surface Water Attenuation and Green Infrastructure The applicant is requested to clarify the following:
A. The proposed attenuation of 127m3 (80m3 +47m3) is undersized by approximately 10%. A revised drawing is required showing increased surface water attenuation by 10%. The attenuation shall be provided by using additional SuDS (Sustainable Drainage Systems). Only in exceptional circumstance shall attenuation be provided by an underground system. For such an underground attenuation system it is preferable to use an arched type system instead of an aquacell system for ease of maintenance and durability reasons.
B. A comprehensive SUDS Management Plan shall be submitted to demonstrate that the proposed SUDS features have reduced the rate of run off into the existing surface water drainage network. A maintenance plan shall also be included as a demonstration of how the system will function following implementation. Additional natural SUDS features shall be incorporated into the proposed drainage system for the development such as, detention basins, filter drains, swales etc. In addition, the applicant shall provide the following:
i. Demonstrate the treatment train, biodiversity value and amenity value of the SUDS proposals for the catchment in the residential areas. .
ii. Demonstrate how the proposed natural SUDS features will be incorporated and work within the drainage design for the proposed development including drainage / attenuation calculations for same.
iii. The applicant shall show further proposed SuDS features for the development such as green roofs, grass areas, channel rills, swales, permeable paving and other such SuDS and show what attenuation capacity is provided by such SuDS. Bio retention tree pits should be designed so that they enable tree pits to both support healthy tree growth while at the same time to help treat and attenuate water coming from hard landscaping areas.
iv. Natural Suds measures should be detailed to remove/ reduce the requirement for underground attenuation tanks in line with the development plan objectives.
v. Tree Pits to incorporate SuDS bioretention features and sufficient growing medium. SuDS details need to show how the water drains from the road/pavement hard surface into the SUDS tree pit, clearly outlining how SuDS features within the tree pits will function. The applicant is requested to refer to the recently published 'SDCC Sustainable Drainage Explanatory, Design and Evaluation Guide 2022' for acceptable SUDS tree pit details.
C. In assessing the provision of SuDS at the site, the applicant shall consider the interrelationship of SuDS and green infrastructure. The applicant is required to show compliance with the quoted policies and sections of the South Dublin County Development Plan 2022 – 2028 and submit details demonstrating:

i. How they intend to reduce fragmentation of existing green infrastructure. The applicant should provide a green infrastructure plan showing connections through the site and connections to wider GI network.
ii. How the appropriate Green Space Factor (GSF) will be achieved for the relevant land use zoning objective.

CFI: Item 2

2. Public Open Space

The applicant is requested to provide greater detail about proposals to mitigate the absence of public open space provision on site. In this regard the applicant is requested to liaise with the Public Realm Department and agree suitable upgrades to Tymon Park that would benefit the future occupants of the proposed development.

Response:

We had a meeting and several consultations with the public realm/ parks department in relation to the suitable upgrades for Tymon park that would benefit the future occupants of the proposed development. We are in agreement that a contribution is to be made for the suitable upgrade to Tymon Park. The value calculation of these works is ongoing between SDCC and ourselves. Please see consulting planner Armstrong Fenton's response.

Site Outline

Approximate outline of Tymon Park

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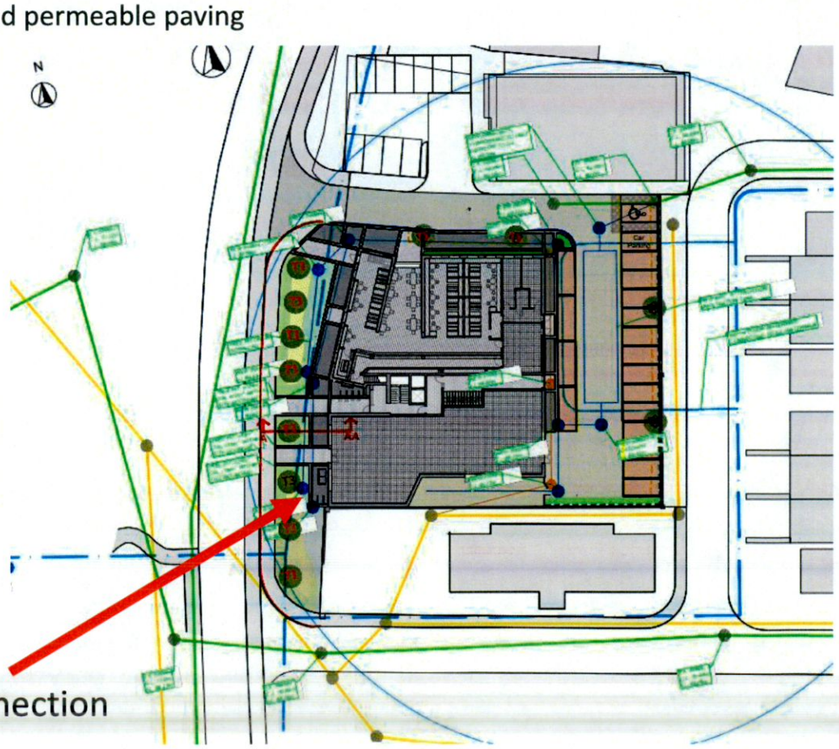
CFI: Item 3

3. Sustainable Urban Drainage Systems, Surface Water Attenuation and Green Infrastructure The applicant is requested to clarify the following:
A. The proposed attenuation of 127m3 (80m3 +47m3) is undersized by approximately 10%. A revised drawing is required showing increased surface water attenuation by 10%. The attenuation shall be provided by using additional SuDS (Sustainable Drainage Systems). Only in exceptional circumstance shall attenuation be provided by an underground system. For such an underground attenuation system it is preferable to use an arched type system instead of an aquacell system for ease of maintenance and durability reasons.
areas.

Response:

3A - Please see Consulting Engineer DWG and Report. The consulting engineer has revised and rationalised the SuDs requirements. The landscape has facilitated a number of these, including tree pits, green roofs, planting and permeable paving



DRAINAGE LEGEND:

- Existing Surface water
- Existing Foul water
- New Surface water
- New Foul water
- New Watermain
- Existing Watermain

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CFI: Item 3

3 B. A comprehensive SUDS Management Plan shall be submitted to demonstrate that the proposed SUDS features have reduced the rate of run off into the existing surface water drainage network. A maintenance plan shall also be included as a demonstration of how the system will function following implementation. Additional natural SUDS features shall be incorporated into the proposed drainage system for the development such as, detention basins, filter drains, swales etc. In addition, the applicant shall provide the following:
i. Demonstrate the treatment train, biodiversity value and amenity value of the SUDS proposals for the catchment in the residential areas.

Response:

3
B (i) – The Suds strategy has been developed and designed by the consulting Engineers, RMDA have suggested landscape interventions, which the consulting Engineers have incorporated into the natural Suds strategy. All natural Suds interventions are interconnected to provide for a total volume. Therefore, fragmentation would affect the ability of the natural Suds train to clean and store temporarily the surface run off. This cannot happen, and is therefore connected, as may be seen from the Engineers drawings and RMDA graphic
.
The Suds train is not fragmented but provides a total so it may offset the quantum that a tank has to deal with. Notably the water enters the natural Suds train first, thereby cleaning it, which is one of the principal reasons for employing natural Suds details.

The Suds details on site takes water from the immediate area and follows the Suds train thereafter.

The Suds details and the green infrastructure are closely related, the surface water passes through the natural interventions, green roof, tree pits, grass areas and the hydrocarbons are removed. The green infrastructure is required as the first step of the Suds Train, removing impurities and temporarily storing the surface water.

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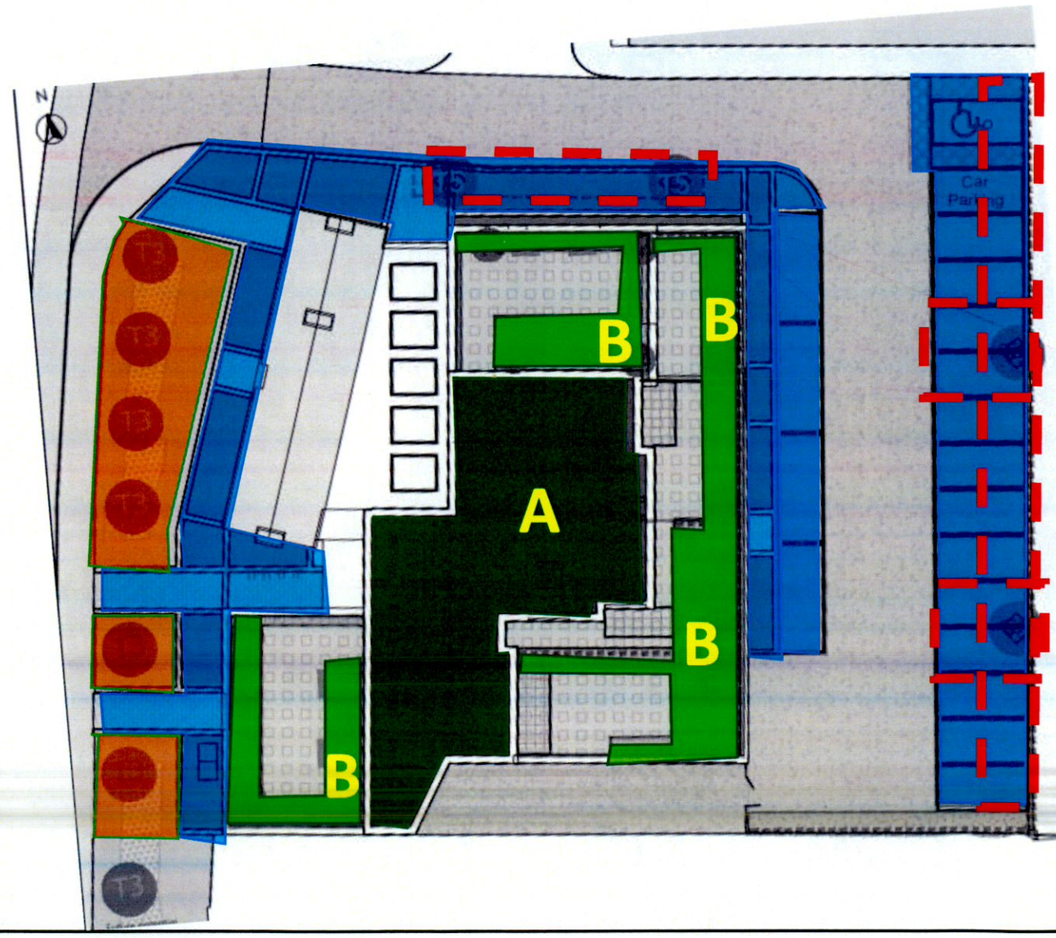
CFI: Item 3

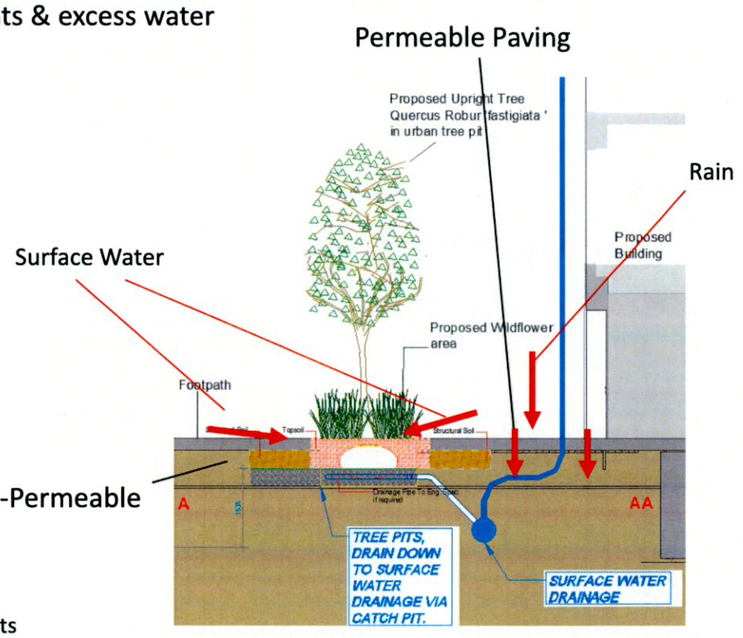
3

B. iii. The applicant shall show further proposed SuDS features for the development such as green roofs, grass areas, channel rills, swales, permeable paving and other such SuDS and show what attenuation capacity is provided by such SuDS. Bio retention tree pits should be designed so that they enable tree pits to both support healthy tree growth while at the same time to help treat and attenuate water coming from hard landscaping areas.

Response:

B. (iii) - . - Please see graphic showing extent of suds features for the development such as Green Roofs, Grass Areas, Permeable Paving, Tree Pits and Planting. Also please see drawings (DWG 1,DWG 3,DWG 4,DWG 5) for the Landscape SuDs details. The tree pits shall have an overflow pipe in cases of storm events & excess water





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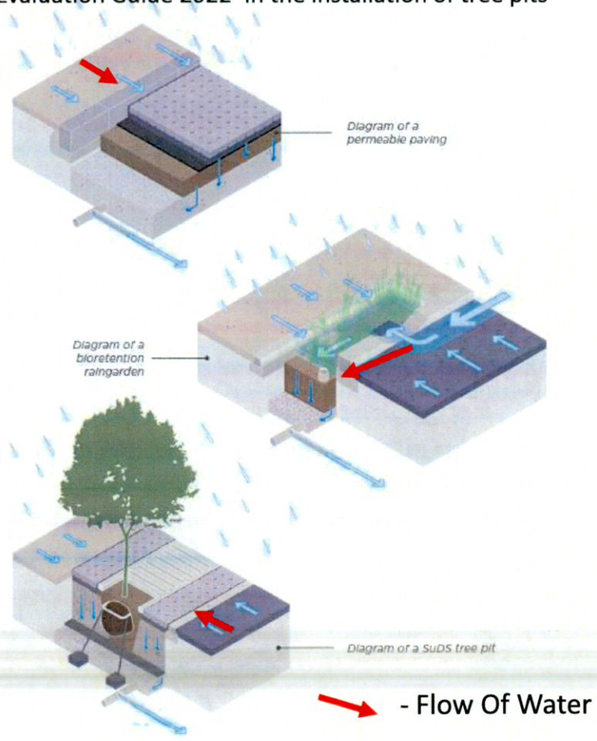
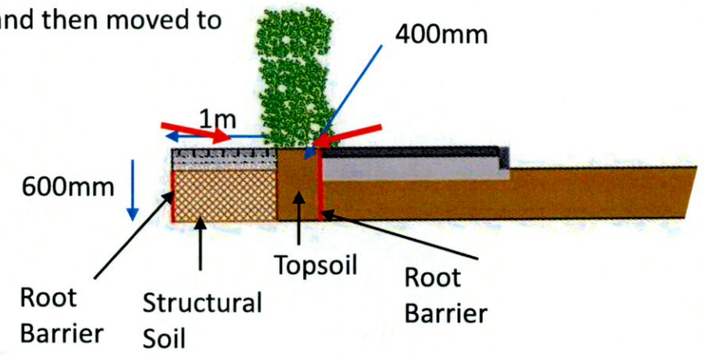
3 iv. Natural Suds measures should be detailed to remove/ reduce the requirement for underground attenuation tanks in line with the development plan objectives.
v. Tree Pits to incorporate SuDS bioretention features and sufficient growing medium. SuDS details need to show how the water drains from the road/pavement hard surface into the SUDS tree pit, clearly outlining how SuDS features within the tree pits will function. The applicant is requested to refer to the recently published 'SDCC Sustainable Drainage Explanatory, Design and Evaluation Guide 2022' for acceptable SUDS tree pit details.

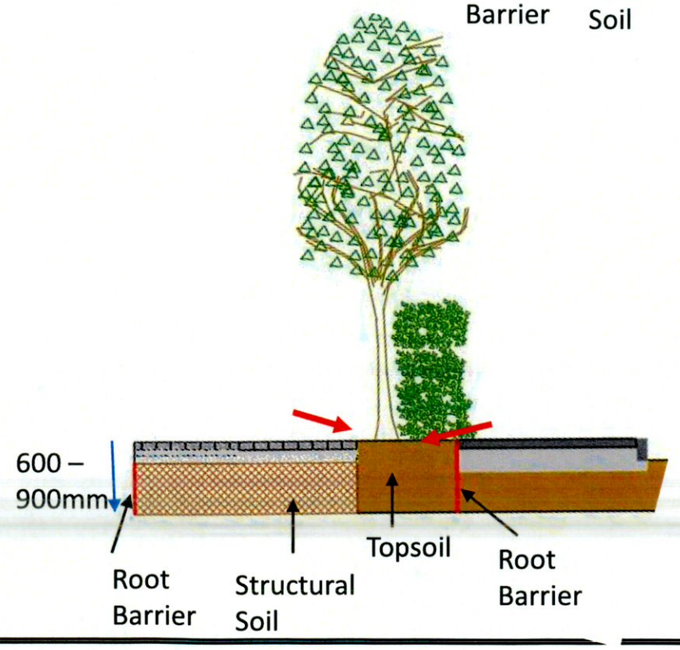
Response:

3 (iv) - Please see Consulting Engineer DWG and Report. Natural SUDS measures have been included throughout the development; these include the green roof, grass areas, permeable paving, tree pits and planting
3 (v) - The consulting engineer and RMDA have detailed the tree pit with the SuDs function. The water should fall from the road/paths to the tree pit where it shall be held temporarily (or infiltrate to soil) and then moved to the surface water system

We have referred to the 'SDCC Sustainable Drainage Explanatory, Design and Evaluation Guide 2022' in the installation of tree pits







- Flow Of Water

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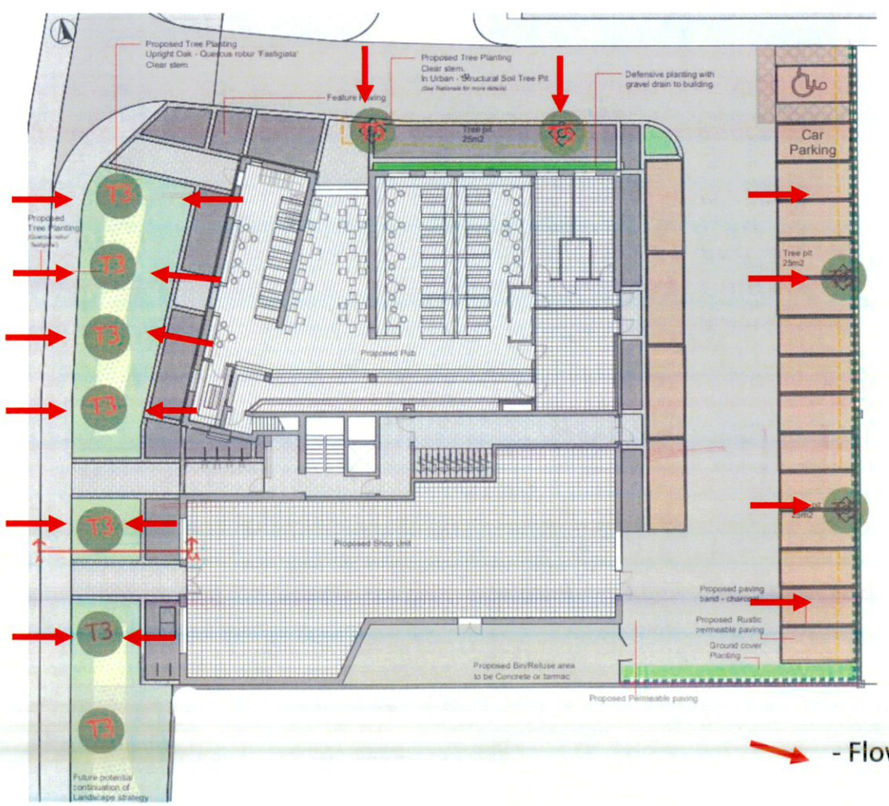
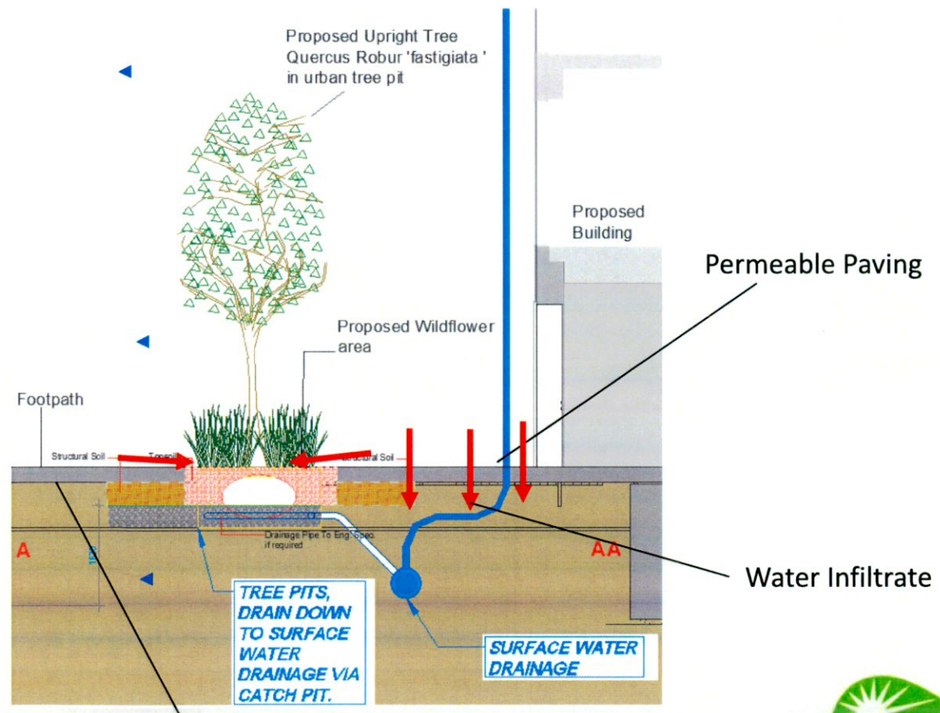
v. Tree Pits to incorporate SuDS bioretention features and sufficient growing medium. SuDS details need to show how the water drains from the road/pavement hard surface into the SUDS tree pit, clearly outlining how SuDS features within the tree pits will function. The applicant is requested to refer to the recently published 'SDCC Sustainable Drainage Explanatory, Design and Evaluation Guide 2022' for acceptable SUDS tree pit details.

Response:

(v) - The paving surrounding the tree pits is permeable, the tree pits close to hardcore areas. The tree Pits are to incorporate SuDS bioretention features and sufficient growing medium (16-20 cubic metres). The SuDS details show how the water drains from the road/pavement hard surface into the SUDS tree pit, clearly outlining how SuDS features within the tree pits will function. We have referred to the recently published 'SDCC Sustainable Drainage Explanatory, Design and Evaluation Guide 2022' for acceptable SUDS tree pit details.





- Flow Of Water

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C. In assessing the provision of SuDS at the site, the applicant shall consider the interrelationship of SuDS and green infrastructure. The applicant is required to show compliance with the quoted policies and sections of the South Dublin County Development Plan 2022 – 2028 and submit details demonstrating:

i. How they intend to reduce fragmentation of existing green infrastructure. The applicant should provide a green infrastructure plan showing connections through the site and connections to wider GI network.

Response:

(i). – The proposed site is on an infill site which currently has no real existing GI, in our design we have added tree planting, shrub planting, green roofs and open grass areas to try and reduce the fragmentation of the site to the areas around it. In this, a total landscape approach has been adopted. We have used green roofs, tree pits and green areas to try and connect the site better with a more concise design. All the landscape elements previously mentioned combine to provide SuDs in the site.

The interventions that we are using that count for SuDs are; green roofs, tree pits, planting, grass areas and permeable paving.

On the next two pages we show how the design tries to cut down the fragmentation in the area, and the various SuDs interventions we have used on the site from the SDCC SuDs document

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CFI: Item 3 C (i)

Current Site:

No GI connection crossing the road

Current site has no green infrastructure at all.

Proposed Site:

GI connection crossing the road. Grass verge and tree planting

Proposed site adding to the Gi with addition of tree planting, shrub planting, green roofs and grass areas

GI Area

Strong GI Area

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CFI: Item 3c (i)

C. In assessing the provision of SuDS at the site, the applicant shall consider the interrelationship of SuDS and green infrastructure. The applicant is required to show compliance with the quoted policies and sections of the South Dublin County Development Plan 2022 – 2028 and submit details demonstrating:

i. How they intend to reduce fragmentation of existing green infrastructure. The applicant should provide a green infrastructure plan showing connections through the site and connections to wider GI network.

Response:

The following images are taken from the SDCC SuDs plan and show how the site has incorporated SuDS and GI.

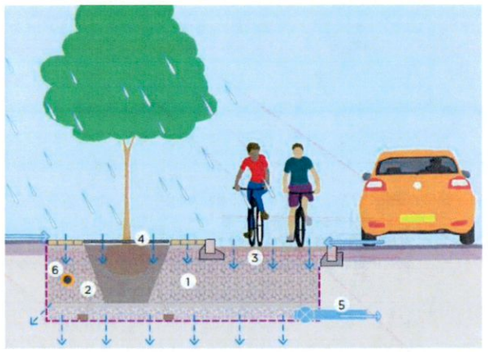
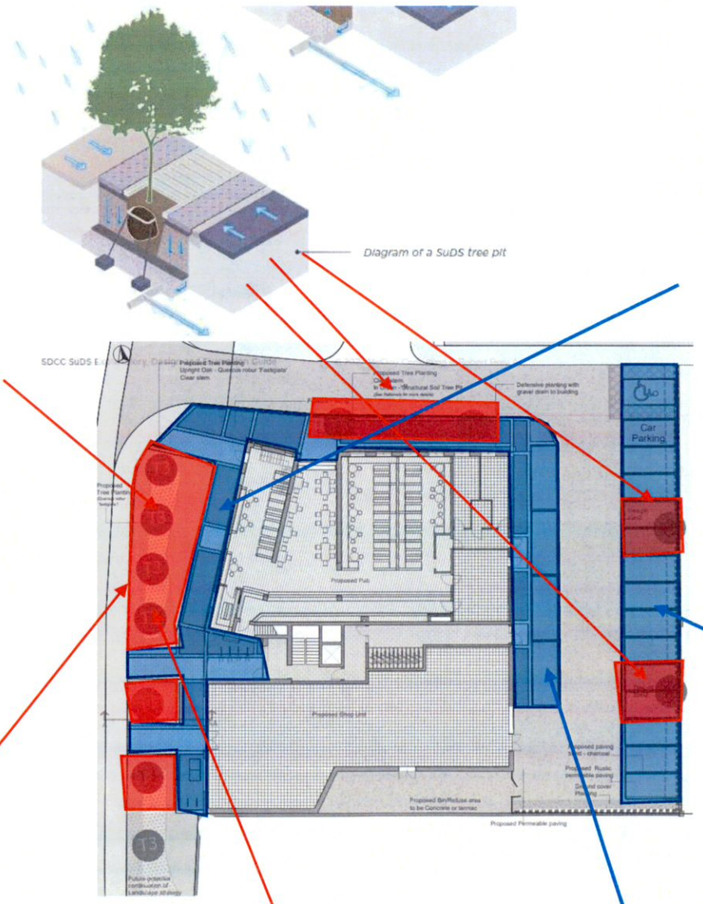
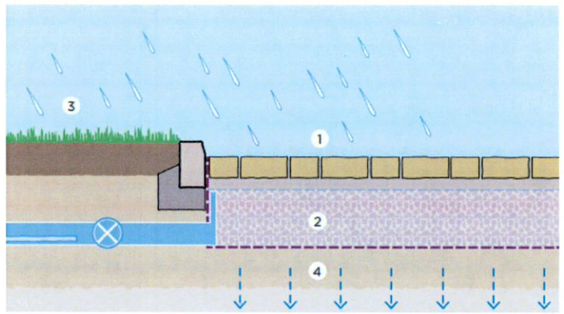
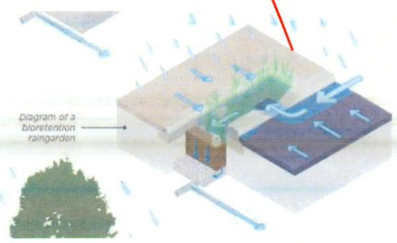


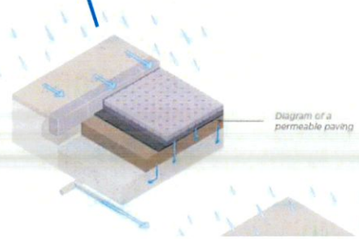
Image shows Collection of 'sheetflow' rainfall runoff over flush kerb into a shallow swale. Strategic Housing Development, Newcastle, Co.Dublin





Permeable pavement managing runoff at source. Strategic Housing Development, Newcastle, Co.Dublin





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C. In assessing the provision of SuDS at the site, the applicant shall consider the interrelationship of SuDS and green infrastructure. The applicant is required to show compliance with the quoted policies and sections of the South Dublin County Development Plan 2022 – 2028 and submit details demonstrating:

ii. How the appropriate Green Space Factor (GSF) will be achieved for the relevant land use zoning objective.

Response:

C. The proposed site has limited/ no green infrastructure – as it formed a public house and car park with no existing hedges or trees.

(ii) - We have calculated the green space factor, however as a small infill site, the GSF is difficult to achieve as the original open space has been taken in charge.

- Please see green space factor.

User input indicated by Orange fields

User Input	
Zoning lookup	Minimum GI Score
RES	0.5

1. Enter Development Site Area m² HERE ▶	2196		
Surface Type (see tab for detailed descriptions)	Factor	Proposed Surface Area m²	Factor Values
1. Short Lawn	0.3	154	46
2. Tall Lawn (wild, not mown)	0.5	74	37
Permeable Paving	0.3	594	178.2
Vegetation		0	0
4a. Vegetation-Shrub below 3cm	0.4	218	87.2
4b. Vegetation-Shrub / Hedgerow above 3cm	0.5	305	152.5
4c. Vegetation-Pollinator friendly perennial planting	0.5	0	0
4d. Vegetation-Preserved hedgerow	1.2	0	0
Trees		0	0
5a. New trees	0.6	162	97
5b. Preserved trees	1.2	0	0
7. SuDS intervention (rain garden, bioswale)	0.6	110	66
Green Roof		0	0
9a. Green Roofs - Intensive green roof (substrate is 1 metre or greater in depth)	0.7	0	0
9b. Green Roofs - Extensive green roof (less than 1 metre in depth)	0.6	218	130.8
10. Green wall	0.4	0	0
11. Retained Open Water	2	0	0
12. New open water	1.5	0	0
Total Equivalent Surface Area of Greening Factors		1623.5	

Green Factor Numerator	0.50

Minumum Required GI score	Final GI score	Result
0.5	757.7	.34

We have been in contact with the Public Realm and Parks Department in SDCC regarding a contribution for open space development in Tymon park.

The site has been maximised to the current location. Originally the development was part of a larger development to the rear with the correct quantum of open space met. The current application is being viewed as a separate application hence the requirements for green open space. We have been in consultation with SDCC Public Realm / Parks department in relation to the GI Score.

We have been advised by Parks department that the upgrades to Tymon Park shall satisfy the balance of the GI score.

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Landscape Masterplan:

Cuckoo's Nest, Greenhills Road, Kilnamanagh, Dublin 24

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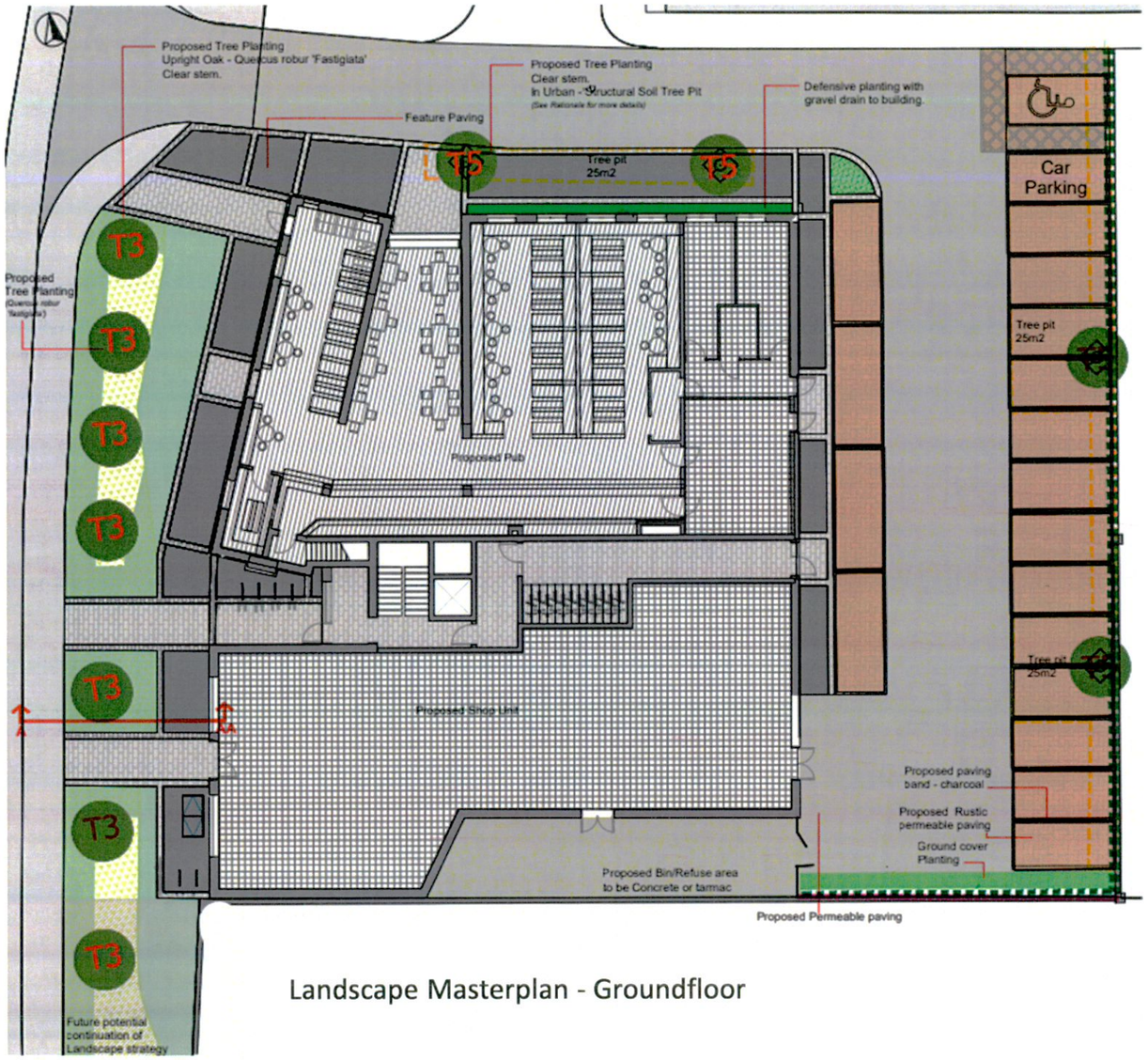
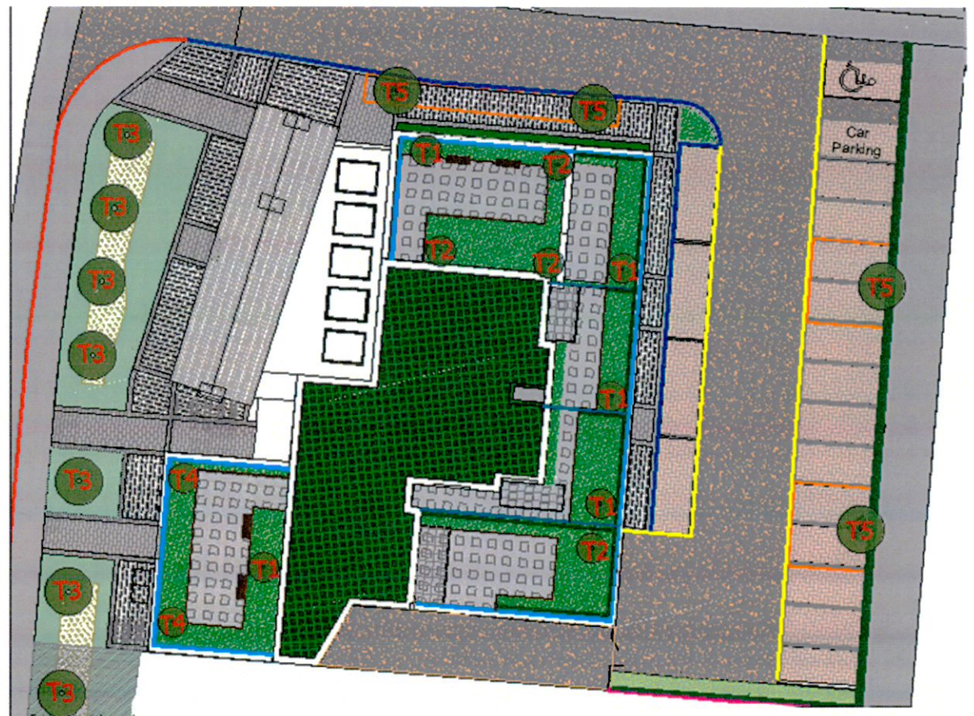


Landscape Masterplan - Groundfloor



Landscape Roof Masterplan

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Pollinator Plan
www.pollinators.ie